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Review of Heteronychiina (Diptera, Sarcophagidae)

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Abstract: Review of Heteronychiina (Diptera, Sarcophagidae). *Priamus* Suppl. 36: 1-60, 28 figs. Characteristic of subtribe Heteronychiina, diagnoses and key to genera and subgenera, faunistical and ecological data on 98 species are given. The species of subtribe distributed in Palaearctic, mainly in its south-western part, and northern part of Oriental Region. Larvae are obligate internal parasitoids, very rare specialized necrophages of terrestrial snails. Lectotype ♂ of *Heteronychia kozlovi* firstly designated. Firstly recorded: *H. bulgarica* for Latvia and Stavropol Region (Russia); *H. chaetoneura* for Belarus, Greece, Hungary, Italy, Latvia and Slovakia; *H. haemorrhoides* for Latvia; *H. infantilis* for continental Greece; *H. lejlekensis* for KZ and Uzbekistan; *H. pauciseta* for Austria and several Russian Regions: Bashkortostan, Buryatia, Perm; *H. shnitnikovi* for TM; *H. smirnovi* for Voronezh Region (Russia); *H. depressifrons* for Perm Region (Russia); *H. haemorrhoides* (Böttcher, 1913) for Iraq; *H. boettcheri* for Bulgaria. 9 new combinations are given: *Heteronychia (Asceloctis) sororia* Povolný, 2004, **n. comb.**; *H. (Ctenodasyptigia) mediterranea* (Whitmore, 2011), **n. comb.**; *H. (s. str.) anatolica* (Whitmore, 2011), **n. comb.**; *H. (s. str.) gabrielei* (Whitmore, 2009), **n. comb.**; *H. (s. str.) hystrix* (Pandellé, 1896), **n. comb.**; *H. (s. str.) infantilis* (Böttcher, 1913), **n. comb.**; *H. (s. str.) lejlekensis* (Whitmore, 2011), **n. comb.**; *H. (s. str.) rosellensis* (Whitmore, 2011), **n. comb.**; *H. (s. str.) tunisiae* (Whitmore, 2011), **n. comb.** 2 new generic synonyms are given: *Shoachaeta* Lehrer, 1997, **n. syn.** of *Discachaeta* Enderlein, 1928 and *Atlantina* Lehrer, 2013, **n. syn.** of *Discachaeta* Enderlein, 1928. 28 new special synonyms are designated: *Devriesia picciolinea* Lehrer, 2012, **n. syn.** of *H. balanina* (Pandellé, 1896); *Ctenodasyptigia acroficta* Lehrer, 2013, **n. syn.** of *H. minima* (Rondani, 1862); *Spatulapica heilongia* Lehrer 2009, **n. syn.** of *H. abramovi* (Rohdendorf, 1938); *S.dentiphalla* Lehrer 2012, **n. syn.** of *H. ancilla* (Rondani, 1865); *H. conficta* Lehrer, 2013, **n. syn.** of *H. armeniaca* (Rohdendorf, 1937); *Spatulapica porziana* Lehrer, 2012, **n. syn.** of *H. belanovskiyi* Verves, 1973; *H. garda* Lehrer 2012, **n. syn.** of *H. benaci* (Böttcher, 1913); *H. phallandina* Lehrer, 2013, **n. syn.** of *H. dissimilis* (Meigen, 1826); *Sarcophaga giganta* Pape, 1996, **n. syn.** of *H. gigas* (Povolný, 1986); *H. budapestana* Lehrer, 2011, **n. syn.** of *H. infixa* (Böttcher, 1913); *H. recubophalla* Lehrer, 2013, **n. syn.** of *H. heptapotamica* (Rohdendorf, 1937); *Shoachaeta olimpiana* Lehrer, 2012, **n. syn.** of *H. kataphygionis* Povolný, 1999; *H. stromboliana* Lehrer, 2013, **n. syn.** of *H. kertezi* (Villeneuve, 1912); *H. suriyyaha* Lehrer, 2013, **n. syn.** of *H. lacrymans* (Villeneuve, 1912); *H. vonrohdendorfi* Lehrer 2013, **n. syn.** of *H. pandellei* (Rohdendorf, 1937); *H. haesita* Lehrer, 2013, **n. syn.** of *H. pauciseta* (Pandellé, 1896); *H. turbophalla* Lehrer 2013b, **n. syn.** of *H. plotnikovi* (Rohdendorf, 1925); *H. simulopontica* Lehrer, 2013, **n. syn.** of *H. pontica* (Rohdendorf, 1937); *H. verorecta* Lehrer 2013, **n. syn.** of *H. porrecta* (Böttcher, 1913); *H. nadae* Lehrer, 2006, **n. syn.** of *H. rohdendorfi* Mihályi, 1975; *H. kyrgyziana* Lehrer, 2013, **n. syn.** of *H. shnitnikovi* (Rohdendorf, 1937); *H. telengai* Verves, 1973: 947, **n. syn.** of *H. boettcheri* (Villeneuve, 1912); *Pandelleola immortalis* Lehrer, 2012, **n. syn.** of *H. boettcheri* (Villeneuve, 1912); *P. karmelina* Lehrer, 2012, **n. syn.** of *H. boettcheri* (Villeneuve, 1912); *P. lunzeria* Lehrer, 2012, **n. syn.** of *H. boettcheri* (Villeneuve, 1912); *P. pieriana* Lehrer, 2012, **n. syn.** of *H. boettcheri* (Villeneuve, 1912); *H. vagans* forma *cruenta* Peris et al., 1998, **n. syn.** of *H. vagans* (Meigen, 1926); *Notoecus madeirops* Lehrer 2013, **n. syn.** of *Notoecus longestylatus* (Strobl, 1906).

Key words: Sarcophagidae, Heteronychiina, diagnosis, key, genera, subgenera, species, distribution, hosts.

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1. General information

This paper contains the original interpretation of new data about *Heteronychiina* in spite of traditional system of sarcophagids (Lopes, 1969, 1982, 1989; Lopes et al., 1977; Povolný & Verves 1997; Rohdendorf, 1965, 1967; Shewell, 1987; Verves, 1986, 1989a, b, 1993; Verves & Khrokalo, 2009). The new faunistic data, mainly results of revision of materials from several scientific institutions (see below) and original authors' collections are given too. The majority of recent faunistic data from Ukraine have been published previously (Verves, 1998a; Verves & Khrokalo, 2014a, b). The general faunistic data are given after Bernotienė et al., 2006; Kano et al., 1999; Khrokalo & Verves, 2009; Koçak, 2014; Lehrer, 2006c; Pape, 1996; Pape & Merz, 1998; Pape et al., 2002; Povolný & Verves, 1997; Richet et al., 2011; Verves, 1986, 1990, 1993, 1998, 2001; Verves & Khrokalo, 2006, 2014a, b; Whitmore, 2011. The genera and subgenera are given according to Verves, 1986, 1989, 1990, 1993; Verves & Khrokalo, 2006; Xue & Verves, 2009; Xue et al., 2011.

Abbreviations of states' names present according to MFI country codex. The first state of regional records are asterisked (*). The determinations of specimens have been carried out with using of a stereomicroscope Leica M205C (Leica Microsystems, Wetzlar, DE).

Subtribe *Heteronychiina* Rohdendorf, 1965

Rohdendorf, 1965: 683, 693.

Heteronychiina: Lehrer, 2012a: 1; 2012b: 19; Povolný & Verves, 1997: 158; Verves, 1989a: 93; 1993: 489; Verves & Khrokalo, 2006: 64; 2009: 270.

Grey, small to medium-sized (body length 2.0-15.0 mm) flies with checkering pattern at abdominal tergites, sometimes almost shining black. Flagellomere usually 1,2-2,0 times longer than pedicel; arista plumose or at least shortly haired. Thorax with 3, sometimes 2 or 4 strong postsutural dorsocentral (*pdc*) bristles; hind trochanter usually with a ventral brush of tightly-spaced, shortened, spine-like setae; propleuron bare. Wing vell r5 open, sometimes closed or petiolate; vein R1 with setulae on dorsal surface or bare. 3rd abdominal tergite with or without a single pair of mediomarginal setae. ♂: 5th abdominal sternite Y-formed, with brushes forming by numerous thickened spinus-laked setae at the base of each arm; epandrium orange red to black in colour, 1.5-3.0 times longer than broad, with distinctly elongated ventral margin; cercus hook-shaped, sometimes with distinct preapical dorsal protuberance; apical part of cerci usually entirely covered with setae, rarely with more or less conspicuous local areas; pregonite narrow and elongate, postgonite hook-shaped; basiphallus elongate, epiphallus absent; vesica unpaired, spine- or finger-lake, sometimes (*Karovia*) triangular; harpes absent; median stylus bifurcate, always short; lateral styli mid long, rod-shaped, rarely more or less widening apically; ventralia with or without apical arms; juxta well developed, sometimes distinctly shortened; lateral juxtal processes variable in shape, often tooth-like or absent. ♀: mid femoral organ more or less distinct; 6th abdominal sternite as a rule complete, rarely centrally separated into a pair of lateral lobes, blackish to brownish red; tergites 7th-10th usually absent, 6th sternite elongate.

This subtribe includes 5 genera and 98 species, distributed in Palaearctic, mainly in its south-western part, and northern part of Oriental Region. Larvae are obligate internal parasitoids, very rare facultative parasitoids and specialized necrophages (*Karovia*) of terrestrial snails (phylum *Mollusca*: informal group *Pulmonata*).

Acronyms of depositories

BMNH Natural History Museum, London, United UK.

CNBFVR Centro Nazionale per lo Studio e la Conservazione della Biodiversità Forestale "Bosco Fontana", Verona, Italy.

CNMP Czech National Museum, Prague, Czech Republic.

DCAA Departamento de Ciencias Ambientales y Recursos Naturales, Universidad de Alicante, ES.

EIZB Estonian Institute of Zoology and Botany, Tartu, Estonia

FED Far East Division of the Russian Academy of Sciences

FNS Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt-am-Main, Germany.

FSAG Faculté Universitaire des Sciences Agronomiques, Gembloux, Belgium

GZI Institute for Zoology, Georgian Academy of Sciences, Tbilisi, Georgia.

HNHM Hungarian Natural History Museum, Budapest, Hungary.

IEAS Institute of Entomology, Academia Sinica, Shanghai, CN.

IEOS Instytut Ekologii i Ochrony Środowiska UMK, Toruń, Poland.
IEE Instituto Español de Entomología, Madrid, ES.
IEEU Institute of Evolutionary Ecology, Kyiv, Ukraine.
IMEC Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences and health, P. L. A., Beijing, CN.
IRSNB Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium.
IZCA Institute of Zoology, Chinese Academy of Sciences, Beijing, CN.
IZGAS Institute of Zoology, Georgian Academy of Sciences, Tbilisi, Georgia.
LZG Laboratoire de Zoologie Générale et Faunistique, Faculté des Sciences Agronomiques à Gembloux, Belgium.
LU Institute of Biology, University of Latvia, Salaspils, Latvia.
MCU Museum of Cairo University, Egypt.
MGAB Muséum d'Histoire Naturelle "Grégoire Antipa", Bucharest, Romania
MHNL Musée d'Histoire Naturelle de Lille
MMBC Moravian Museum, Brno, Czech Republic.
MMS Museo de la Ciencias Naturales de Madrid, ES.
MNHN Muséum National d'Histoire Naturelle, Paris, France
MNHUB Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität, Berlin, Germany
MSNB Muséum des Sciences Naturelles de Barcelone, ES
MZLU Museum of Zoology, Lund University, Lund, Sweden
MZUF Museo Zoologico de "La Specola", Florence, Italy.
MZUR Museo di Zoologia, Università di Roma "Sapienza", Rome, Italy.
NCZS National Collection of Zoological Survey of India, Calcutta
NHRM Naturhistoriska Riksmuseet, Stockholm, Sweden.
NMW Naturhistorisches Museum, Wien, Austria.
SET South European Territory, Russian Federation.
SIZK Schmalhausen Institute of Zoology of National Academy of Sciences of Ukraine, Kyiv.
SMB Städtischen Museum Braunschweig, Germany.
SMF Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt-am-Main, Germany.
SMCC Sichuan Medical College, Chengdu, CN
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany.
SOFM National Museum of Natural History, Sofia, Bulgaria.
SZM Siberian Zoological Museum of the Institute of Animal Systematics and Ecology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia.
TAU Tel Aviv University, IL
TMDU Department of Medical Zoology, Tokyo Medical & Dental University, Japan.
TU Toruń University, Poland.
UCME = Departamento de Zoología, Facultad de Biología, Universidad Complutense, Madrid, ES.
ULTC Universidad de La Laguna, Tenerife, Canaries
UNS Université de Neuchâtel, Switzerland.
USNM Department of Entomology, Smithsonian Institution, National Museum of Natural History, Washington, DC, USA.
WNM National Museum of Wales, Cardiff, England.
YVC Yu. G. Verves private collection, Kyiv, Ukraine.
ZIN Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russian Federation.
ZMAM Institute of Systematics and Biology of Populations, Zoological Museum, University of Amsterdam, The Netherlands.
ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.
ZMUC Zoological Museum, Natural History Museum of Denmark, University of Copenhagen, Denmark.
ZMUM Museum of Zoology, Moscow State University, Moscow, Russian Federation.
ZSM Zoologische Staatssammlung, Munich, Germany.

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3. Key to genera and subgenera ³

1. Cell r5 petiolate; vein R1 bare 2.
- Cell r5 open, rarely closed at wing border; vein R1 bare or setose 3.
2. 3-4 pairs of *pd*; ♂: apical part of cercus laterally with strong dorsal preapical baek-like swelling; vesica small, not protruding; each of elongate juxtal arms with dorsal spinus (Figs. 1-3) 4. *Artamonoviella* Verves
- 2 pairs of *pd*; ♂: apical part of cercus laterally almost not widened in preapical area; vesica strongly protruding, finger-shaped; juxtal arms shortened, without dorsal spinus (Figs. 4-6) 8. *Notoecus* Stein
3. Juxta massive, well sclerotised, with a pair of elongate ribbon lateral arms (Figs. 7-9) 5. *Discachaeta* End.
- Juxta without lateral arms or latests short or spoon-shaped 4.
4. Vesica well sclerotised, short, triangle-shaped; ventralia almost not protruding; apical part of cercus in profile shortened and pointed, wedge-shaped (Figs. 10-14) 7. *Karovia* Lehrer
- Vesica membranous, spine- or finger-lake; ventralia well developed, protruding; apical part of cercus in profil elongate, with dorsal protuberance or without it 6. *Heteronychia* B. B.
- a. Ventralia very wide, rounded at apex b.
- Ventralia with pointed apical arms c.
- b. Lateral arms of juxta well developed, widened; vein R1 as a rule setulose on dorsal surface (Figs 15-17) 6.2. Subg. *Boettcherella* End.
- Lateral arms of juxta absent; vein R1 bare (Figs. 18-20) 6.5. Subg. *Pandelleola* Rohd.
- c. Vesica finger-lake; juxta narrowly elongated, without lateral arms (Fig. 21) 6. 1. Subg. *Asceloctis* End.
- Vesica pointed at apex d.
- d. Juxta elongate, obtusely rounded, with laterally disposed lateral arms (Fig. 22) 6.3. Subg. *Ctenodasypygia* End.
- Juxta another constructed, its lateral arms absent or ventrally disposed (Figs. 23-28) 6.4. Subg. *Heteronychia* s. str.

4. Genus *Artamonoviella* Verves, 1989

Verves, 1989a: 94.

Type species: *Sarcophaga monspellensia* Böttcher, 1913, by original designation.

Artamonoviella: González-Mora et al., 1994: 203; Verves, 1993: 332.

“*Sarcophaga (Heteronychia) filia*-group” (in part): Whitmore et al., 2013: 629.

One Palaearctic species.

5.1. *Artamonoviella monspellensia* (Böttcher, 1913) (Figs. 1-3)

Sarcophaga monspellensia Böttcher, 1913a: 364.

Type locality: FR: Hérault: Palavas. Lectotype: ♂ (designated by Whitmore, 2011: 42); deposited in FNS.

Sarcophaga monspellensia: Schembri et al., 1991: 271; Séguy, 1941: 125.

Sarcophaga (Heteronychia) monspellensia: Gatt & Ebejer, 2014: 112; Pape, 1996: 331; Richet et al., 2011: 12, 29, 48, 84, 109, 133, 223; Whitmore, 2011: 42.

Sarcophaga (Artamonoviella) monspellensia: Pape et al. 2002: 219.

Heteronychia monspellensia: Verves, 1986: 157.

Artamonoviella monspellensia: González-Mora et al., 1994: 203; Verves, 1989: 94.

Distribution: Europe: ES (continental and Balearic Is.); FR (continental), GR, IT (continental & Sicily), MT; Asia: Mid East (TR); North Africa: TN.

Material examined: TN: Schmiedsknecht, 1 ♂ (Villeneuve) (SMNS).

³ ♂s only; ♀s have not any generic specificity.

6. Genus *Discachaeta* Enderlein, 1928

Discachaeta Enderlein, 1928: 30.

Type species: *Sarcophaga cucullans* Pandellé, 1896, by original designation.

Discachaeta: Baranov, 1942: 562; Lehrer, 1997: 77; 2009c: 6; 2013c: 19; Mihályi, 1979: 59, 139; Pape, 1987: 122; 1995: 7; Peris et al., 1994b: 157; Povolný, 1986: 232; Povolný & Verves, 1997: 158; Rohdendorf, 1965: 683, 693; Rudzinski, 1995: 113; Verves, 1986: 145; 1993: 491.

Pierretia (*Discachaeta*): Rohdendorf, 1937: 312.

Sarcophaga (*Discachaeta*): Pape, 1996: 314.

Shoachaeta Lehrer, 1997: 78; **n. syn.** Type species: *Sarcophaga amita* Rondani, 1860, by original designation.

Atlantina Lehrer, 2013c: 26; **n. syn.** Type species: *Discachaeta kunonis* Pape, 1986, by original designation.

Discachaetina: Enderlein, 1928: 44; erroneous original spelling of *Discachaeta*.

“*Sarcophaga* (*Heteronychia*) *cucullans*-group”: Whitmore et al., 2013: 632.

7 species of this genus are distributed in western Palaearctic and (*D. smithi*) north part of Oriental Region. Morphological features of ♂ genitalia of *D. amita* and *D. kunonis* are not distinguishable for designations of separate monotypic genera *Shoachaeta* and *Atlantina* respectively.

5.1. *Discachaeta amita* (Rondani, 1860)

Sarcophaga amita Rondani, 1960: 391.

Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 6); deposited in MZUF.

Sarcophaga amita: Böttcher, 1913a: 120; Séguy, 1941: 73.

Sarcophaga (*Discachaeta*) *amita*: Pape, 1996: 314; Pape et al., 2002: 219; Prado e Castro et al., 2010: 286; Richet et al., 2011: 27, 87, 100, 117; Whitmore et al., 2009: 32.

Pierretia (*Discachaeta*) *amita*: Rohdendorf, 1937: 316.

Discachaeta amita: Mihályi, 1979: 140; Pape, 1988: 6; Peris et al., 1994b: 157; Povolný, 1986: 232; Povolný & Verves, 1997: 159; Rohdendorf, 1965: 683, 693; 1970: 665; Verves, 1986: 145; 1993: 492.

Shoachaeta amita: Lehrer, 1997: 78.

Material examined DE: Württemberg, 1872-1873, 1 ♂ (Roser) (SMNS).

Distribution: Europe: DE, FR (continental & Corsica), HU, IT, PT, ES (continental & Balearic Is.), CH.

5.2. *Discachaeta arcipes* (Pandellé, 1896)

Sarcophaga arcipes Pandellé, 1896: 184.

Type locality: FR: Hautes-Pyrénées, Tarbes. Lectotype: ♂ (designated by Pape, 2004: 23); deposited in MNHN.

Sarcophaga arcipes: Böttcher, 1913a: 116; Séguy, 1941: 76; Pape, 2004: 23.

Sarcophaga (*Discachaeta*) *arcipes*: Pape, 1996: 314; Pape et al., 2002: 219; Coupland & Baker, 2004: 112, 123; Richet et al., 2011: 27, 86, 100, 118.

Discachaeta arcipes: Enderlein, 1928: 36; Mihályi, 1979: 140; Verves & Kuzmovich, 1979: 17; Povolný, 1986: 233; Verves, 1986: 146; 1993: 492; Peris et al., 1994b: 157, 159; Rudzinski, 1995: 113; Povolný & Verves, 1997: 159; Verves & Khrokalo, 2014a: 19.

Pierretia (*Discachaeta*) *arcipes*: Rohdendorf, 1937: 313; Strukan, 1967: 45.

Pierretia arcipes: Povolný & Groschafft, 1959: 131.

Bellieria arcipes: Baranov, 1942: 577.

Distribution: Europe: AT, BE, BG, CH, CZ, DE, ES, FR, HR, HU, IT, NL, PL, RO, RS, SK, UA, UK (England).

Larvae parasitize terrestrial gastropods *Euomphalia strigella* (Povolný & Groschafft, 1959; Coupland & Baker, 2004), *Helicella itala* (Rudzinski, 1995) and *Xerolenta obvia* (Verves & Kuzmovich, 1979).

Material examined: AT: Mögling, Umgb. A. i. (X 1613), 1 ♂ (Franz) (NMW); PL: Toruń, lotnisko, 30.07.2001, 4 ♂ (Szpila); SK: Jánošíková, 26.04.1961, 1 ♂ (Valkovič); UA: Ternopil Region: Terebovlya District, Zastynoch, 22.05.1972, 1 ♂ (Verves) (YVC).

5.3. *Discachaeta cucullans* (Pandellé, 1896)

Sarcophaga cucullans Pandellé, 1896: 179.

Type locality: FR: Hautes-Pyrénées, Tarbes. Lectotype: ♂ (designated by Pape, 2004: 23); deposited in MNHN.

Sarcophaga cucullans: Böttcher, 1913a: 118; Séguy, 1941: 93; Pape, 2004: 26; Pape & Merz, 1998: 400.

Sarcophaga (Discachaeta) cucullans: Pape, 1995: 20; Pape, 1996: 315; Coupland & Baker, 2004: 112, 123; Richet et al., 2011: 27, 100, 118; Koçak, 2014: 350.

Sarcophaga (Heteronychia) cucullans: Richet et al., 2011: 86; Koçak, 2014: 349.

Discachaeta cucullans: Enderlein, 1928: 30; Baranov, 1942: 563; Lehrer, 1966: 197; 1997: 80; Mihályi, 1979: 139; Peris et al., 1994b: 157, 158; Povolný, 1986: 233; Povolný & Verves, 1990: 291; 1997: 160; Rohdendorf, 1970: 665; Verves, 1978b: 41; 1986: 146; 1993: 493; Verves & Khrokalo, 2014a: 19.

Pierretia (Discachaeta) cucullans: Baranov, 1941: 373; Rohdendorf, 1937: 314.

Discachaeta jacentkovskyi Enderlein, 1936: 98. Type locality: BG: Preslav. Lectotype: ♂ (designated by Pape, 1995: 20); deposited in ZMHB.

Material examined: AZ: Talysh, Amburder, 31.05.1976, 1 ♂ (Dolin) (SIZK); Lerik District, Kosmolyan, 1600-1700 m a. s.l., 20.V.-8.VI.1969, 12 ♂, 5 ♀; Mistan, 18.07.1970, 2 ♀ (Richter & Tanasiychuk) (ZIN). GE: Ozurgeti Municipality, Vakidzhvari, 27.05.1965, 1 ♂ (Gudjabidze) (GZI).

Distribution: Europe: AT, BA, BG, CH, CZ, DE, ES, FR, GR, HR, HU, IT (continental & Sicily), RO, RS, SK, UA; Asia: Mid East (IL, TR), North Caucasus: RU (Dagestan), Transcaucasia.

Larvae are known as internal parasitoids of several terrestrial gastropod species: *Cernuella virgata*, *Theba pisana* (Lehrer, 1966; Hopkins & Baker, 1993), *Euomphalia strigella* and *Xerolenta obvia* (Povolný & Verves, 1990).

5.4. *Discachaeta esthera* Lehrer, 2006

Discachaeta esthera Lehrer, 2006a: 46.

Type locality: IL: Nizzanim. Holotype: ♂; deposited in TAU.

Distribution: Asia: Mid East (IL).

5.5. *Discachaeta kunonis* Pape, 1986

Discachaeta kunonis Pape, 1986a: 2.

Type locality: PT: Madeira: Machico, Facho. Holotype: ♂; deposited in ZMUC.

Discachaeta kunonis: Verves, 1993: 495.

Sarcophaga (Discachaeta) kunonis: Pape, 1996: 315; Pape et al., 2002: 21.

Distribution: North Africa: PT (Madeira I.).

5.6. *Discachaeta pumila* (Meigen, 1826)

Sarcophaga pumila Meigen, 1826: 24.

Type locality: Europe, probably DE. Holotype: ♂; deposited in FNS.

Sarcophaga pumila: Böttcher, 1913a: 116; Moran, 1987: 129; Séguy, 1941: 136.

Sarcophaga (Discachaeta) pumila: Pape, 1996: 316; Pape et al., 2002: 219; Pohjoismäki & Kahanpää, 2014: 389; Richet et al., 2011: 27, 86, 100, 119.

Sarcophaga (Heteronychia) pumila: Coupland & Baker, 2004: 112, 123.

Bellieria pumila: Baranov, 1942: 588; Enderlein, 1928: 37.

Pierretia (Discachaeta) pumila: Rohdendorf, 1937: 313.

Discachaeta pumila: Mihályi, 1979: 140; Pape, 1987: 124; Peris et al., 1994b: 157, 159; Povolný & Slamečková, 1979: 115; Rohdendorf, 1970: 668; Verves, 1986: 146; 1993: 495; Povolný & Verves, 1997: 160; Verves & Khrokalo, 2014a: 19.

Sarcophaga proxima var. *inermis* Strobl, 1894: 63. Type locality: AT: Steiermark, Aussee. Holotype: ♂; deposited in NMW.

Sarcophaga latigena Pandellé, 1896: 199. Type locality: RU: Kaliningrad Region. Holotype: ♂; deposited in MNHN.

Distribution: Europe: AT, BE, CH, CZ, DE, DK, ES, FI, FR (continental), HR, IT (continental), LT, LV, NL, NO, PL, RO, RU, SE, SK, UA, UK; Asia: Mid East (IL).

Larvae are suspected parasitoids of the crop-damaging snails *Theba pisana* and *Cernuella virgata* (Harpaz & Oseri, 1961; Moran, 1987). Flies reared in the laboratory on freshly killed snails (Richet et al., 2011).

Material examined: AT: Tirol, Mayrhofen, 23.08.1945, 1 ♂ (ZSM). DK: Smørmosen, UB38, 19.05.1984, 1 ♂, (Pape) (YVC). DE: [Bayern] Allgäu, Wengen b. Hinterstein, "A 1293" 11.08.1926, 1 ♂ (Engel); Bremen, 7.07.40, 1 ♀ (SMNS); Bremen-Vahr, 14.07.1982, 1 ♂ (Vedder) (SMB); [Meklenburg-Vorpommern] Kühlungsborn, 19.07.1928, 1 ♂ (SMNS). LV: Engure, 17.07.2011, 1 ♀; Salaspils, 24.05.2010, 3 ♀ (Karpa); Saldus, 2.06.1992, 1 ♂ (Spuris) (LU). RU: Leningrad Region: Rozhdestvenno, 22.06.1956, 3 ♂ (Stackelberg) (ZIN).

5.7. *Discachaeta smithi* (Nandi, 1990)

Pierretia (*Bercaea*) *smithi* Nandi, 1990: 21.

Type locality: IN: "Bihar" [recte: Jharkhand]: Deoghar, Nalakha. Holotype: ♂; deposited in NCZS.

Heteronychia (*Ctenodasypygia*) *smithi* Nandi, 2002: 520, 523.

Discachaeta smithi Verves, 2001: 238.

Sarcophaga (*Heteronychia*) *smithiana* Pape, 1996: 59, 334; unnecessary new name for *Pierretia smithi*.

Distribution: Oriental Region: IN (Jharkhand).

6. Genus *Heteronychia* Brauer & Bergenstamm, 1889

Heteronychia Brauer & Bergenstamm, 1889: 124.

Type species: *Heteronychia chaetoneura* Brauer & Bergenstamm, 1889, by original designation.

Heteronychia: Fan, 1992: 651; Kano & Kurahashi, 1999: 73; Lehrer, 2006b: 1; Mihályi, 1979: 59, 140; Pape, 1987: 133; Peris et al., 1996a: 15; 1998: 165; Povolný & Verves, 1997: 161; Rohdendorf, 1965: 684, 693; 1970: 630, 665; Verves, 1986: 146; 1990: 569, 584, 594; 1993: 496; Verves & Khrokalo, 2006: 76, 148.

Pierretia: Rohdendorf, 1937: 303; Povolný & Slamečková, 1959: 423; misidentification: not *Pierretia* Robineau-Desvoidy, 1863.

Sarcophaga (*Heteronychia*): Lehrer, 2012a: 1; 2012b: 1; 2012c: 19; 2013a: 1; 2013b: 1; 2013d: 1; Pape, 1995: 6, 10, 11; 1996: 321; Pekbey & Hayat, 2011: 1; Whitmore, 2009: 566; 2010: 3; 2011: 1; Whitmore et al., 2013: 604.

89 species of this genus are distributed in Palaearctic and northern part of Oriental Regions.

6.1. Subgenus *Asceloctis* Enderlein, 1928

Asceloctis Enderlein, 1928: 51.

Type species: *Sarcophaga balanina* Pandellé, 1896, by original designation.

Asceloctis: Pape, 1995: 4.

Pierretia (*Asceloctis*): Rohdendorf, 1937: 316.

Heteronychia (*Asceloctis*): Peris et al. 1996a: 15; Rohdendorf, 1965: 684, 693; Verves, 1986: 147; 1993: 497;.

Hartigia: Enderlein, 1928: 46, not Robineau-Desvoidy 1863: 521 (Junior homonym of *Hartigia* Schioedte, 1838, Hymenoptera). Type species: *Hartigia strenua* Robineau-Desvoidy, 1863, by original designation.

Pierretia (*Hartigia*): Rohdendorf, 1937: 317.

Salemea Rohdendorf, 1965: 683, 693. Type species: *Hartigia strenua* Robineau-Desvoidy, 1863, by original designation.

Salemea: Lehrer, 1995a: 157; Povolný, 2004: 17; Verves, 1986: 158; 1993: 489.

Devriesia Lehrer, 1995a: 158. Type species: *Sarcophaga ferox* Villeneuve, 1908, by original designation.

Salemiophalla Lehrer, 1995a: 162. Type species: *Sarcophaga desertorum* Salem, 1935, by original designation.

"*Sarcophaga* (*Heteronychia*) *ferox*-group": Whitmore et al., 2013: 631.

Ascelotis: Engel, 1938: 16; erroneous subsequent spelling of *Asceloctis* Enderlein, 1928.

Ascleloctis: Zumpt, 1953: 22; erroneous subsequent spelling of *Asceloctis* Enderlein, 1928.

7 species of this subgenus are distributed exclusively in Mediterranean Region.

6.1.1. *Heteronychia (Asceloctis) amputata* (Pape, 1990)

Sarcophaga amputata Pape, 1990: 39.

Type locality: PT: Madeira: between Canical & Prainha. Holotype: ♂; deposited in WNM.

Sarcophaga (Discachaeta) amputata: Pape, 1996: 314; Pape et al. 2002: 219.

Heteronychia (Asceloctis) amputata: Verves, 1993: 497.

Distribution: North Africa: PT (Madeira I.).

6.1.2. *Heteronychia (Asceloctis) balanina* (Pandellé, 1896) (Fig. 21)

Sarcophaga balanina Pandellé, 1896: 180.

Type locality: FR: Var, Hyères. Lectotype: ♂ (des. Pape 2004, p. 24); deposited in MNHN.

Sarcophaga balanina: Böttcher, 1913a: 120; Séguy, 1941: 79.

Sarcophaga (Heteronychia) balanina: Coupland 1994: 19; Coupland & Baker, 2004: 113; Pape, 1996: 323; 2004: 24; Pape et al., 2002: 219; Richet et al., 2011: 28, 85, 99, 127.

Asceloctis balanina: Enderlein, 1928: 51; Baranov, 1942: 634.

Pierretia (Asceloctis) balanina: Rohdendorf, 1937: 317.

Heteronychia (Asceloctis) balanina: Peris et al., 1996a: 17, 18; Rohdendorf, 1975: 199; Verves, 1986: 147; 1993: 498.

Heteronychia salerensis Lehrer, 1978: 145. Type locality: ES: Valencia, El Saler. Holotype: ♂; deposited in IEE.

Devriesia picciolinea Lehrer, 2012d: 1, n. syn. Type locality: IT: Cascine. Holotype: ♂; deposited in MSNF.

Distribution: Europe: BG, HR, FR (continental), IT (continental), PT, RS, ES; North Africa: MA.

Larvae are parasitoids of terrestrial snails *Eobania vermiculata* and *Theba pisana* (Coupland, 1994; Coupland & Baker, 2004); introduced to Southern Australia as natural enemy of crop pests - terrestrial molluscs (Baker, 2002; Hopkins & Baker, 1993); reared in the laboratory on freshly killed snails (Richet et al., 2011).

The original description and drawings of ♂ genitalia of *Devriesia picciolinea* are very detailed and practically not differentiated from similar descriptions and drawings of ♂ genitalia of *H. balanina* by Rohdendorf, 1937: 338, fig. 454; Verves, 1993: 498, fig. 524; Peris et al., 1996a: 18, figs 1-5, etc.

Material examined: PT: Alvor, 6.05.1999, 5 ♂ (Buszko) (YVC).

6.1.3. *Heteronychia (Asceloctis) desertorum* (Salem, 1935)

Sarcophaga desertorum Salem, 1935: 31.

Type locality: EG: Suez Road, 17 km from Heliopolis. Holotype: ♂; deposited in MCU.

Sarcophaga (Heteronychia) desertorum: Pape, 1996: 325.

Pierretia (Hartigia) desertorum: Rohdendorf, 1937: 321.

Heteronychia (Salemea) desertorum: Verves, 1986: 159.

Heteronychia (Asceloctis) desertorum: Peris et al., 1996a: 18.

Salemiophalla desertorum: Lehrer, 1995a: 162; 2003: 406.

Distribution: Asia: Mid East (EG); North Africa: EG.

6.1.4. *Heteronychia (Asceloctis) ferox* (Villeneuve, 1908)

Sarcophaga ferox Villeneuve, 1908: 123.

Type locality: ES: Canary Is.: Tenerife, Santa Cruz. Lectotype: ♂ (designated by Whitmore, 2011: 32); deposited in MNHUB.

Sarcophaga ferox: Böttcher, 1913a: 121, 371; Séguy, 1941: 100;

Sarcophaga (Heteronychia) ferox: Gatt & Ebejer, 2014: 111; Pape, 1996: 327; Richet et al., 2011: 29, 85, 99, 129; Whitmore, 2009: 572; 2011: 31, 32.

Hartigia ferox: Enderlein, 1928: 46.

Pierretia (Hartigia) ferox: Rohdendorf, 1937: 319.

Salemea ferox: Povolný, 1997a: 51; 1999: 19; 2004: 19; Povolný & Znojil, 1999: 195; Rohdendorf, 1975: 198; Verves, 1986: 159.

Heteronychia (Asceloctis) ferox: Peris et al. 1996a: 17, 19.

Devriesia ferox: Lehrer, 2003: 173; 2013a: 10.

Sarcophaga bolivari Gil Collado, 1932: 281. Type locality: ES: Balearic Is., Ibiza I. Holotype: ♂; deposited in MMS.

Sarcophaga bolivari: Schembri et al., 1991: 270; Séguy, 1941: 83.

Sarcophaga (Heteronychia) bolivari: Pape, 1996: 327.

Pierretia (Hartigia) bolivari: Rohdendorf, 1937: 320.

Salemea bolivari: Verves, 1986: 159.

Devriesia weberi Lehrer, 1995a: 160. Type locality: ES: Balearic Is., Menorca I. Holotype: ♂; deposited in ZMAM.

Heteronychia (Asceloctis) perplexa Peris et al. 1996a: 19. Type locality: ES: Alicante, Pego. Holotype: ♂; deposited in UCME.

Sarcophaga (Heteronychia) perplexa: Richet et al., 2011: 85.

Distribution: Europe: ES (continental and Balearic Is.), FR (continental), IT (continental, Sardinia and Sicily), MT; North Africa: DZ, EG, ES (Canary Is.), MA, TN.

Larvae are the internal parasitoids of land snail *Eobania vermiculata* (Gatt & Ebejer, 2014).

Material examined: ES: Almeria, Rioja, 12. 04.1966, 1 ♂ (Lyneborg) (YVC).

6.1.5. *Heteronychia (Asceloctis) mariutana* (Salem, 1935)

Sarcophaga mariutana Salem, 1935: 26.

Type localities: EG: Mariut, Bahig; Mariut, Burg (MCU).

Sarcophaga mariutana: Salem, 1936: 247.

Pierretia (Hartigia) mariutana: Rohdendorf, 1937: 321.

Devriesia mariutana: Lehrer, 2003: 174.

Salemea mariutana: Povolný, 2004: 8.

Salemea ferox: Verves, 1986: 159 (in part); misidentification: not *Sarcophaga ferox* Villeneuve, 1908.

Sarcophaga (Heteronychia) ferox: Pape, 1996: 327 (in part); misidentification: not *Sarcophaga ferox* Villeneuve, 1908.

Distribution: Asia: Mid East (EG, IL); North Africa: EG (Sinai).

6.1.6. *Heteronychia (Asceloctis) sororia* (Povolný, 2004), **n. comb.**

Salemea sororia Povolný, 2004: 8, 10.

Type locality: IT: Sicily: Pizzo Onofrio-Casina (Tribia), near Palermo. Holotype: ♂; deposited in MMBC.

Distribution: Europe: IT: Sicily.

This species belongs to genus *Heteronychia* and subgenus *Asceloctis* according modern authors' conception.

6.1.7. *Heteronychia (Asceloctis) strenua* (Robineau-Desvoidy, 1863)

Hartigia strenua Robineau-Desvoidy, 1863: 521.

Type locality: FR: near Paris.

Hartigia strenua: Baranov, 1942: 619; Enderlein, 1928: 46.

Sarcophaga strenua: Séguy, 1941: 153.

Sarcophaga (Heteronychia) strenua: Pape, 1996: 334.

Heteronychia strenua: Mihályi, 1979: 141.

Heteronychia (Asceloctis) strenua: Peris et al., 1996a: 18.

Salemea strenua: Verves, 1986: 159.

Pierretia (Hartigia) sternua: Rohdendorf 1937: 319 (incorrect subsequent spelling of *strenua*).

Distribution: Europe: CZ, FR (continental), HR, IT (continental).

6.2. Subgenus *Boettcherella* Enderlein, 1928

Boettcherella Enderlein, 1928: 49.

Type-species: *Sarcophaga setinervis* Rondani, 1860, by original designation.

Boettcherella: Lehrer, 1998a: 80; 1998b: 3; 2003: 124; Pape, 1995: 5.

Pierretia (Boettcherella): Rohdendorf, 1937: 336.

Heteronychia (Boettcherella): Povolný & Verves, 1990: 312; 1997: 163; Rohdendorf, 1965: 683, 693; Verves, 1986: 147; 1993: 499.

3 species are distributed in Mediterranean and Mid-Asian Regions.

6.2.1. *Heteronychia* (*Boettcherella*) *helenae* (Trofimov, 1948)

Pierretia (*Boettcherella*) *helenae*: Trofimov, 1948: 835.

Type locality: AZ: Talysh. Holotype: ♂; deposited in ZIN.

Sarcophaga (*Heteronychia*) *helenae*: Koçak, 2014: 349; Koçak & Kemal, 2013: 138; Whitmore, 2011: 35.

Spatulapica helenae: Lehrer, 2013d: 22.

Heteronychia (*Mediterranisca*) *kobachidzei* Gudjabidze, 1965: 183. Type locality: GE: Verkhnya Racha, Gurshevi. Holotype: ♂; deposited in IZGAZ.

Heteronychia kobachidzei: Verves, 1978b: 42.

Heteronychia (*Ctenodasyptidia*) *kobachidzei*: Verves, 1986: 148.

Sarcophaga (*Heteronychia*) *kobachidzei*: Pape, 1996: 330; Whitmore, 2011: 52.

Heteronychia (*Spatulapica*) *fraterna* Lehrer, 1977a: 27. Type locality: BG: Haskovo. Holotype: ♂; deposited in SOFM.

Spatulapica fraterna: Lehrer, 2012a: 11; 2013d: 23.

Spatulapica delicata Lehrer, 2000a: 33. Type locality: IL: North Amud. Holotype: ♂; deposited in TAU.

Spatulapica delicata: Lehrer, 2012a: 11.

Distribution: Europe: BG, GR; Asia: Mid Asia (TM), Mid East (IL, TR), Transcaucasia.

Material examined: AM: Arzakend, 30.07.1965, 4 ♂ (Richter) (ZIN); Kotigegh [now: Koti], 17.06.1974, 1 ♀ (Ponomarenko) (YVC). TR: Antalya District: Beşkonak, nr Serik, 25.05.2005, 1 ♂; Mercin District: Findiopinari, "alpinarium", 29.05.2005, 2 ♂ (Bystrowski) (YVC).

6.2.2. *Heteronychia* (*Boettcherella*) *mutila* (Villeneuve, 1912)

Sarcophaga setinervis var. *mutila* Villeneuve, 1912b: 611.

Type locality: CY: Larnaka. Lectotype: ♂ (designated by Whitmore, 2011: 43); deposited in IRSNB.

Sarcophaga setinervis var. *mutila*: Böttcher, 1913a: 239; Séguy, 1941: 146.

Sarcophaga (*Heteronychia*) *mutila*: Coupland & Baker, 2004: 113; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 331; Richet et al., 2011: 86; Whitmore, 2011: 43.

Pierretia (*Heteronychia*) *mutila*: Rohdendorf, 1937: 339.

Boettcherella mutila: Baranov, 1942: 628; Lehrer, 1998a: 85.

Heteronychia mutila: Lehrer, 1967: 4; Mihályi, 1979: 143; Rohdendorf, 1970: 667; Verves, 1978b: 41.

Heteronychia (*Boettcherella*) *mutila*: Povolný, 1986: 237; 1997b: 99; Povolný & Verves, 1990: 313; 1997: 163; Verves, 1986: 147; 1993: 500; 1998: 52; Verves & Khrokalo, 2014a: 19.

Heteronychia (*Boettcherella*) *nedelkoffi* Lehrer, 1977a: 32. Type locality: BG: Sliven. Holotype: ♂; deposited in SOFM.

Boettcherella nedelkoffi: Lehrer, 1998a: 86.

Boettcherella galmuda Lehrer 1998a: 90. Type localities: AM, RU, UA.

Distribution: Europe: BG, GR (continental and Poros I.), HR, HU, IT (continental), RO, RS, SK, UA; Asia: Mid East (CY, TR), North Caucasus: RU (Krasnodar Region), Transcaucasia (AM, GE).

Larvae were registered as parasitoids of terrestrial snails of family Helicidae (Coupland & Baker, 2004).

Material examined: HR: Gruz, Ombla, 14.05.1924, 1 ♂ (Lindner). RS: Golubac, 21.04.1927, 1 ♂ (Engel) (SMNS).

6.2.3. *Heteronychia* (*Boettcherella*) *setinervis* (Rondani, 1860) (Figs 15-17)

Sarcophaga setinervis Rondani, 1860: 389.

Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 15); deposited in Museo Zoologico "La Specola", Florence, IT.

Sarcophaga setinervis: Böttcher, 1913a: 130; Pape, 1988: 15; Séguy, 1941: 146.

Sarcophaga (*Heteronychia*) *setinervis*: Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Menzel & Ziegler, 2002: 390; Pape, 1996: 333; Richet et al., 2011: 12, 29, 50, 86, 109, 135.

Boettcherella setinervis: Baranov, 1942: 629; Enderlein, 1928: 49; Lehrer, 1998a: 84; 2003: 124; 2012a: 11; 2013a: 13.

Pierretia (*Heteronychia*) *setinervis*: Rohdendorf, 1937: 336.

Heteronychia setinervis: Mihályi, 1979: 143; Rohdendorf, 1970: 667; Verves, 1978b: 41.

Heteronychia (*Boettcherella*) *setinervis*: Povolný, 1992: 183; 1996: 90; Povolný & Verves, 1990: 291, 313, 315; Verves, 1986: 147; 1993: 501.

Sarcophaga puerula Rondani, 1860: 389. Type locality: "In Italia media et boreali". Lectotype: ♂ (designated by Pape, 1988: 14); deposited in MZUF.

Sarcophaga efflatouni Salem, 1935: 24. Type locality: EG: Mariout. Holotype: ♂; deposited in MCU.

Heteronychia (Boettcherella) seguyi Lehrer, 1977b: 223. Type locality: TR: Denizli, Pamukkale. Holotype: ♂; deposited in LZG.

Distribution: Palaearctic: Europe: AT, BG, FR, GR, HU, IT, MK, RO, RS; Asia: KZ; Mid Asia; Mid East (CY, IL, IR, PS, TR); North Caucasus: RU (Chechnya, Dagestan); Transcaucasia; North Africa: EG. Afrotropical Region: SD⁴.

Material examined: AZ: Aşağı Ağcakənd, 21.05.1974, 1 ♂, (Zherikhin). CY: 6 km SE from Ayia Napa, Cape Greco, N 34°57'56", E 34°03'43", at flowers of *Ferula tingitana*, 9.08.2013, 2 ♂ (Verves) (YVC). GE: Atskuri, 27.07.1967, 2 ♂; Shiraki, 28.05.1965, 3 ♂ (Gudjabidze) (GZI). IL: Negev, Ein Avdat NP, Nahal Zin, 17.05.2006, 2 ♂ (Szpila) (YVC); Mt Scopus, 29.07., 12.08.1930, 2 ♂ (BMNH). TJ: Kulyab, 17.07.1933, 1 ♂ (Popov) (ZIN). TR: Alanya: Avsallar, 36°36'54" N, 31°46'38" E, ground path in bushes, 4-7.08.2010, 38 ♂, 2 ♀, one pair in copula; Antalya: Side, clay loam waste plot of land, 36°47'38" N, 31°22'43" E, 10-19.08.2011, 84 ♂, 38 ♀ (Verves & Khrokalo); Beşkonak near Serik, "st. 1", 25.05.2005, 1 ♂; Mersin: Findiopinari, "alpinarium, st. 2", 29.05.2005, 2 ♂ (Bystrowski) (YVC & IEEU); Konya: Akşehir [as Akschehir Ova], 21.06.1924, 1 ♂ (Lindner) (SMNS).

6.3. Subgenus *Ctenodasypygia* Enderlein, 1928

Ctenodasypygia Enderlein, 1928: 40.

Type-species: *Sarcophaga fertoni* Villeneuve, 1911 (= *Sarcophaga minima* Rondani, 1862), by original designation.

Ctenodasypygia: Lehrer, 2003: 28, 148; 2010: 29; Pape, 1995: 5.

Heteronychia (Ctenodasypygia): Peris et al., 1996b: 23; Povolný & Verves, 1997: 163; Verves, 1986: 148; 1993: 502;

Bercaea: Enderlein, 1928: 40 (misidentification: not *Bercaea* Robineau-Desvoidy, 1863: 549). Type species: *Sarcophaga penicillata* Villeneuve, 1907, by original designation.

Pierretia (Bercaea): Rohdendorf, 1937: 322.

Mediterranisca Rohdendorf, 1965: 684 (as subgenus of *Heteronychia*). Type species: *Sarcophaga penicillata* Villeneuve, 1907, by original designation.

Mediterranisca: Lehrer, 2003: 28, 320.

Leclercqiomyia Lehrer, 1976a: 197. Type species: *Leclercqiomyia thirionae* Lehrer, 1976, by original designation.

Leclercqiomyia: Lehrer, 2003: 28, 231.

Benedenia Lehrer, 1976a: 200 (as subgenus of *Leclercqiomyia*). Type species: *Leclercqiomyia mousseti* Lehrer, 1976 (= *Sarcophaga minima* Rondani, 1862), by original designation.

"*Sarcophaga (Heteronychia) minima*-group": Whitmore et al., 2013: 631.

10 species of this subgenus are exclusively distributed in Mediterranean Region.

6.3.1. *Heteronychia (Ctenodasypygia) mediterranea* (Whitmore, 2011), **n. comb.**

Sarcophaga (Heteronychia) mediterranea Whitmore, 2011: 10.

Type locality: IT: Lazio, Castel Romano. Holotype: ♂; deposited in CNBFVR.

Leclercqiomyia penicillata: Lehrer, 2012c: 22 (misidentification: not *Sarcophaga penicillata* Villeneuve, 1907: 395).

Distribution: Europe: HR, IT (continental & Sicily).

6.3.2. *Heteronychia (Ctenodasypygia) minima* (Rondani, 1862) (Fig. 22)

Sarcophaga minima Rondani, 1862: 113.

Type locality: IT: Parma. Holotype: ♂; deposited in MZUF.

Sarcophaga minima: Böttcher, 1913a: 364; 1913b: 171.

Sarcophaga (Heteronychia) minima: Gatt & Ebejer, 2014: 111; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1988: 10; 1996: 331; Pape et al., 2002: 219; Richet et al., 2011: pp. 29, 84, 101, 133; Whitmore, 2009: 572, 589; 2011: 40.

Pierretia minima: Rohdendorf, 1937: 386.

⁴ after Lewis, 1955; most probably, erroneous determination.

- Heteronychia minima*: Povolný, 1998a: 53; 1999: 19.
Heteronychia (Ctenodasypygia) minima: Peris et al., 1996b: 27; Povolný, 1996: 94; 1997b: 99; Povolný & Verves, 1990: 292; 1997: 185.
Sarcophaga fertoni Villeneuve, 1911: 127. Type locality: FR: Grenoble. Lectotype: ♂ (designated by Whitmore, 2011: 40); deposited in IRSNB.
Sarcophaga fertoni: Böttcher, 1913a: 127; Salem, 1935: 34; 1936: 233; Séguy, 1941: 101.
Sarcophaga (Heteronychia) fertoni: Coupland & Baker, 1994: 185; 2004: 113; Pape et al., 2002: 219; Sevgili et al., 2004: 150.
Ctenodasypygia fertoni: Baranov, 1942: 596; Enderlein, 1928: 40; Lehrer, 2003: 148; 2006d: 15; 2013d: 24.
Pierretia (Bercaea) fertoni: Rohdendorf, 1937: 328.
Heteronychia fertoni: Mihályi, 1979: 144.
Heteronychia (Ctenodasypygia) fertoni: Peris et al., 1996b: 28; Povolný, 1996: 94; Povolný & Verves, 1990: 292; Verves, 1986: 148; 1993: 503.
Pierretia (Bercaea) graeca Rohdendorf, 1937: 327. Type locality: GR: Parnassus Mt. Holotype: ♂; deposited in ZIN.
Heteronychia graeca: Mihályi, 1979: 144.
Heteronychia (Mediterranisca) graeca: Rohdendorf, 1975: 199.
Heteronychia (Ctenodasypygia) graeca: Peris et al., 1996b: 27; Povolný, 1996: 94; Povolný & Verves 1990: 292; Verves, 1986: 148.
Sarcophaga (Heteronychia) graeca: Coupland, 1994: 19; Coupland & Baker, 1994: 185; 2004: 113. Pape, 1996: 328; Pape et al., 2002: 219.
Ctenodasypygia graeca: Koçak, 2014: 350; Koçak & Kemal, 2013: 136; Lehrer, 2006c: 15; 2013d: 24.
Leclercqiomys mousseti Lehrer, 1976a: 200. Type locality: TR: Ortoklar. Holotype: ♂; deposited in LZG.
Ctenodasypygia acroficta Lehrer, 2013d: 20, **n. syn.** Type locality: not given.
Heteronychia (Ctenodasypygia) graeca: Schembri et al., 1991: 270 (incorrect subsequent spelling of *graeca*).
 Distribution: Europe: AT, BG, CZ, ES (continental & Balearic Is.); FR, GR, HR, HU, IT, MT, PT, SK; Asia: Mid East (EG, IL, PS, TR); North Africa: DZ, EG, MA, TN.
 Larvae are internal parasitoids of terrestrial snails: *Cernuella virgata*, *Cochlicella acuta*, *Theba pisana*, *Trochoidea elegans*, *T. simulata* (Coupland, 1994; Coupland & Baker, 1994, 2004).
 Description of ♂ *Ctenodasypygia acroficta* is based at drawings of ♂ genitalia of *H. minima* from Whitmore, 2010: 91, pl. 48. The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.
 Material examined: IL: Negev, Ein Avdat NP, Nahal Zin, 17.V.2006, 2 ♂ (Szpila). MT: "Mis/Fa", 5.07.1978, 1 ♂ (Schembri). TR: Alanya: Avsallar, 36°36'54" N, 31°46'38" E, ground path in bushes, 4-7.08.2010, 9 ♂, 1 ♀; Antalya: Side, clay loam waste plot of land, 36°47'38" N, 31°22'43" E, 12.08.2011, 1 ♂ (Verves & Khrokalo) (YVC & IEEU). PS: Ein Feshkha (as "Ain Feshkha"), Dead Sea, 20.01.1947, 2 ♂; Jeriho, "Be 3/10", 5.04.1947, 2 ♂ (BMNH).

6.3.3. *Heteronychia (Ctenodasypygia) penicillata* (Villeneuve, 1907)

- Sarcophaga penicillata* Villeneuve, 1907: 395 (originally published in synonymy with *Sarcophaga uncicurva* Pandellé, 1896 and validated by subsequent use of Böttcher, 1913a: 127).
 Type locality: FR: Hérault: Palavas. Holotype: ♂; deposited in IRSNB.
Sarcophaga uncicurva penicillata: Böttcher, 1913a: 127, 372; Villeneuve, 1929: 182.
Sarcophaga penicillata: Schembri et al., 1991: 270; Séguy, 1941: 130.
Sarcophaga (Heteronychia) penicillata: Baker & Charwat, 2000: 49; Coupland & Baker, 1994: 185; 2004: 113, 125; Pape, 1996: 332; Pape et al., 2002: 219; Richet et al., 2011: 29, 85, 99, 134.
Bercaea penicillata: Enderlein, 1928: 51.
Heteronychia penicillata: Povolný, 1998a: 53; 1999: 19.
Heteronychia (Mediterranisca) penicillata: Rohdendorf, 1965: 684, 693.
Mediterranisca penicillata: Lehrer, 2003: 320.
Heteronychia (Ctenodasypygia) penicillata: Peris et al. 1996b: 24; Povolný, 1992: 173, 174, 181; 1996: 91; Verves, 1986: 148.
Pierretia (Bercaea) maroccana Rohdendorf, 1937: 325. Type locality: MA: Ain Defali. Holotype: ♂; deposited in ZIN.
 Distribution: Europe: BG, ES (continental & Balearic Is.), HR, FR (continental), GR, IT (continental), MT; Asia: Mid East (IL); North Africa: DZ, MA, TN.

Larvae are sufficiently specific parasites of terrestrial snails *Cochlicella acuta* and *Prietocella barbara* (Coupland, 1994). ♀ remains with the snail and discourages other ♀ from larvipositing for 5-65 min, deposits one larva in snail. Such post-ovipositional "host-guarding" behaviour allows the larva to gain enough of a growth advantage to prevent development of any subsequent larvae deposited on the same host (Feerner & Brown, 1997).

Material examined: IT: Caserta Province: Villalattina nr. Naples, 1500 ft, 15.07.1919, 1 ♂; Toscana, 20. 09.1918, 1 ♂ (Querci) (BMNH). ES: San Quirico de Besora, 10-15.08.1927, 1 ♂ (Engel). TN: [no further data] 1 ♂ (Schmiedsknecht) (SMNS).

6.3.4. *Heteronychia (Ctenodasypygia) santospintosi* (Lehrer & Báez, 1986)

Mediterranisca santospintosi Lehrer & Báez, 1986: 233.

Type locality: ES: Canary Is.: Fuerteventura I., Ortega Valley. Holotype: ♂; deposited in ULTC.

Mediterranisca santospintosi: Lehrer, 2003: 320.

Sarcophaga (Heteronychia) santospintosi: Pape, 1996: 333, Pape et al., 2002: 219.

Heteronychia (Ctenodasypygia) santospintosi: Peris et al., 1996b: 25.

Distribution: North Africa: Es (Canary Is.).

6.3.5. *Heteronychia (Ctenodasypygia) siciliensis* (Böttcher, 1913)

Sarcophaga siciliensis Böttcher, 1913a: 125.

Type locality: IT: Sicily. Holotype: ♂; deposited in SMF.

Sarcophaga (Heteronychia) siciliensis: Coupland & Baker, 2004: 114, 215; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 334; Richet et al., 2011: 84.

Pierretia (Bercaea) siciliensis: Rohdendorf, 1937: 326.

Heteronychia siciliensis: Lehrer, 1967: 6; Povolný, 1998a: 53; Rohdendorf, 1970: 667.

Heteronychia (Ctenodasypygia) siciliensis: Povolný, 1992: 182; 1996: 92; Povolný & Verves, 1990: 293; Verves, 1986: 148; 1993: 503; 1998: 52; Verves & Khrokalo, 2014a: 19.

Ctenodasypygia siciliensis: Lehrer, 2003: 150; 2006c: 16; 2006d: 16; 2008c: 18.

Sarcophaga indigens Villeneuve, 1913, in: Böttcher, 1913a: 125; nomen nudum.

Material examined: IL: Mt Carmel, 22.09.1941, 1 ♂; Kiryat Anavim, 31.07.1930, 1 ♂ (BMNH); Jerusalem, Mt. Scopus, 14.06.1931, 1 ♂ (Aaroni) (SMNS). SY: Golan heights, Katsrin, 9.05.2006 1 ♂ (Szpila). TR: Antalya: Side, clay loam waste plot of land, 36°47'38" N, 31°22'43" E, 10-19.08.2011, 20 ♂, 13 ♀ (Verves & Khrokalo) (YVC & IEEU). PS: Kfar Etzion, 16.10.1935, 1 ♂; Mt Scopus, 15.07. & 17.X.1930, 14.06.1931, 3 ♂ (BMNH).

Distribution: Europe: BG, ES, GR, HU, IT, RO, UA; Asia: Mid East: CY, IL, SY, TR, PS; North Africa: EG, ES (Canary Is.).

6.3.6. *Heteronychia (Ctenodasypygia) tetrrix* (Whitmore, 2011)

Sarcophaga (Heteronychia) tetrrix Whitmore, 2011: 30.

Type locality: IT: Sicily, Messina. Holotype: ♂; deposited in MZUR.

Heteronychia tetrrix: Lehrer, 2012c: 25.

Distribution: Europe: IT (Sicily).

6.3.7. *Heteronychia (Ctenodasypygia) thirionae* (Lehrer, 1976)

Leclercqiomys thirionae Lehrer, 1976a: 197.

Type locality: TR: Bursa, Gemlik. Holotype: ♂; deposited in FSAG.

Heteronychia (Ctenodasypygia) thirionae: Verves, 1986: 148.

Sarcophaga (Heteronychia) thirionae: Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 335; Richet et al., 2011: 29, 85, 99, 136; Whitmore, 2009: 571, 572, 582.

Heteronychia penicillata: Povolný, 1992: 181; 1996: 91; misidentification; not *Sarcophaga penicillata* Villeneuve, 1907.

Distribution: Europe: BG, GR (continental part & Crete), IT (Sardinia), FR (Corsica); Asia: Mid East (TR); North Africa: DZ.

♀ larviposited on living terrestrial snails, probably of the genus *Helicella* (Povolný, 1992).

6.3.8. *Heteronychia (Ctenodasypygia) tricolor* (Villeneuve, 1908)

Sarcophaga tricolor Villeneuve, 1908: 125.

Type locality: ES: Canary Is.: Laguna. Lectotype: ♂ (designated by Whitmore, 2011: 49); deposited in MNHUB.

Sarcophaga tricolor: Böttcher, 1913a: 124; Séguy, 1941: 161.

Sarcophaga (Heteronychia) tricolor: Pape, 1996: 335.

Dasypygia tricolor: Enderlein, 1928: 40.

Pierretia (Pandelleola) tricolor: Rohdendorf, 1937: 329.

Heteronychia (Pandelleola) tricolor: Peris et al., 1996b: 26; Verves, 1986: 155.

Heteronychia tricolor: Lehrer, 2006d: 15; 2013a: 13.

Pandelleola tricolor: Lehrer, 2003: 349.

Leclercqiomys gomezbustilloi Lehrer & Báez, 1986: 236. Type locality: ES: Canary Is.: Tenerife I., Mt Aqua. Lectotype: ♂ (designated by Whitmore, 2011: 49); deposited in MSNB.

Leclercqiomys gomezbustilloi: Lehrer, 2006d: 15; 2013a: 14.

Sarcophaga (Heteronychia) gomezbustilloi: Pape, 1996: 328.

Distribution: North Africa: ES (Canary Is.).

Material examined: ES: Canary Is.: Tenerife I.: Las Casteras, 8.05.1964, 1 ♂, 1 ♀, (Lindner) (SMNS).

6.3.9. *Heteronychia (Ctenodasypygia) uncicurva* (Pandellé, 1896)

Sarcophaga uncicurva Pandellé, 1896: 183.

Type locality: FR: Var, Hyères. Lectotype: ♂ (designated by Peris et al., 1996b: 26); deposited in MNHN.

Sarcophaga uncicurva: Böttcher, 1912: 348; 1913a: 126, 371; Schembri et al., 1991: 271; Séguy, 1941: 163; Pape, 2004: 43.

Sarcophaga (Heteronychia) uncicurva: Coupland & Baker, 2004: 125; Gatt & Ebejer, 2014: 112; Pape, 1996: 335; Pape et al., 2002: 219; Richet et al., 2011: 29, 84, 99, 136; Whitmore, 2009: 572, 584.

Ctenodasypygia uncicurva: Enderlein, 1928: 40.

Pierretia (Bercaea) uncicurva: Rohdendorf, 1937: 323.

Bercaea uncicurva: Baranov, 1942: 596.

Heteronychia (Ctenodasypygia) uncicurva: Peris et al., 1996b: 26; Verves, 1986: 148.

Heteronychia uncicurva: Povolný, 1992: 169.

Leclercqiomys uncicurva: Lehrer, 2003: 234.

Distribution: Europe: ES (continental & Balearic Is.), FR (south part & Corsica), IT (continental, Sardinia & Sicily), MT, PT; North Africa: ES (Canary Is., Melilla), PT (Azores), TN. Successfully introduced into Southern Australia as agent of biological control of adventive terrestrial snails *Cochlicella acuta* and *Prietocella barbara* (Baker & Charwat, 2000).

Larvae are parasitoids of terrestrial snails *Cernuella virgata*, *Cochlicella acuta*, *Eobania vermiculata*, *Otala punctata*, *Prietocella barbara*, *Theba pisana* (Baker 2002; Baker & Charwat, 2000; Coupland, 1994; Coupland & Baker, 1994; Gatt & Ebejer, 2014).

Material examined: MT: Wied Qannotta, 13.07.1978, 1 ♂ (Schembri) (YVC).

6.3.10. *Heteronychia (Ctenodasypygia) villeneuveana* (Enderlein, 1928)

Asceloetis villeneuveana Enderlein, 1928: 51.

Type locality: DZ. Lectotype: ♂ (by designation of Pape, 1995: 25); deposited in MNHUB.

Sarcophaga villeneuveana: Séguy, 1941: 167.

Heteronychia (Ctenodasypygia) villeneuveana: Peris et al., 1999: 135.

Sarcophaga (Heteronychia) villeneuveana: Gatt & Ebejer, 2014: 113; Richet et al., 2011: 29, 85, 99, 138.

Heteronychia (Ctenodasypygia) ardua Peris et al., 1996b: 25, unnecessary new name for *Pierretia penicillata* sensu Rohdendorf, 1937: 322. Type locality: ES: Valencia, Liria. Lectotype: ♂ (designated by Peris et al., 1999: 136); deposited in MSNB.

Pierretia (Bercaea) penicillata: Rohdendorf, 1937: 322; misidentification; not *Sarcophaga penicillata* Villeneuve, 1907.

Sarcophaga (Heteronychia) penicillata: Coupland & Baker, 2007: 7.

Bercaea penicillata: Baranov, 1942: 631.

Heteronychia (Mediterranisca) penicillata: Rohdendorf, 1975: 199.

Distribution: Europe: HR, IT (continental & Sicily), FR (continental), MT, PT, ES (continental & Balearic Is.); North Africa: DZ, MA, TN.

Larvae are internal parasitoides of snails *Cochlicella acuta* (Coupland & Baker, 1994) and *Helicella* sp. (Peris et al., 1996b). Successfully introduced in Southern Australia as agent of biological control of adventive terrestrial snail *Cochlicella acuta*; from releases made over the period 2000 to 2002, this species has become established (Coupland & Baker, 2007).

6.4. Subgenus *Heteronychia* s. str.

Erichsonia Robineau-Desvoidy, 1863: 481 (Junior homonym of *Erichsonia* Wesrwood, 1849, Coleoptera: Cerambycidae; and *Erichsonia* Dana, 1849, Crustacea). Type species: *Sarcophaga haemorrhoea* Meigen, 1826, by original designation.

Hartigia Robineau-Desvoidy, 1863: 521 (Junior homonym of *Hartigia* Schiödte, 1938, Hymenoptera: Cephidae). Type species: *Hartigia concolor* Robineau-Desvoidy, 1863 (= *Sarcophaga dissimilis* Meigen, 1826), by original designation.

Dasypygia Enderlein, 1928: 40. Type species: *Sarcophaga arvorum* sensu Rondani, 1860, not Meigen, 1826 (= *Pierretia rondaniana* Rohdendorf, 1937), by original designation.

Sarcoctenia Enderlein, 1928: 29. Type species: *Sarcoctenia siciliana* Enderlein, 1928, by monotypy.

Platyperas Enderlein, 1934: 189. Type species: *Platyperas quinquestrigata* Enderlein, 1934 (= ♀ of *Heteronychia* sp.), by original designation.

Eupierretia Rohdendorf, 1937: 363, as subgenus of *Pierretia*. Type species: *Sarcophaga proxima* Rondani, 1860, by original designation.

Spatulapica Fan, 1964: 306, 316. Type species: *Sarcophaga haemorrhoea* Meigen, 1826, by original designation.

Pierretia: Enderlein, 1928: 47 (not *Pierretia* Robineau-Desvoidy, 1863). Type species: *Sarcophaga haemorrhoea* Meigen, 1826, by original designation.

64 species of this subgenus are distributed in Palaearctic and northern part of Oriental Regions.

6.4.1. *Heteronychia* (s. str.) *abramovi* (Rohdendorf, 1938)

Pierretia abramovi Rohdendorf, 1938: 108.

Type locality: RU: Primorye: Sikhote-Alin State Reservation. Holotype: ♂; deposited in ZIN.

Heteronychia (Spatulapica) abramovi: Artamonov, 1980: 31; Fan, 1964: 314, 318; 1992: 652; Verves, 1979: 862, 867.

Heteronychia abramovi: Artamonov, 1988: 28; Kano et al., 1967: 23; Kano & Kurahashi, 1999: 73; Kano & Shinonaga, 1965: 248; Verves & Khrokalo, 2006: 123.

Sarcophaga (Heteronychia) abramovi: Pape, 1996: 322.

Spatulapica abramovi: Lehrer, 2009b: 25.

Spatulapica heilongia Lehrer, 2009b: 26, **n. syn.** Type locality: not given.

Distribution: Asia: Far East: CN (Heilongjiang), JP (Hokkaido); RU (Kurily Is., Primorye, Sakhalin I.).

Description of ♂ *Spatulapica heilongia* is based at drawings of ♂ genitalia of *H. abramovi* from Fan (1992: 653, fig. 1295). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: JP: Hokkaido: Sapporo, 23.06.1942, 1 ♂ (Nishijima); Haruyama Park, 28.06.1960, 1 ♂ (Kano) (YVC). RU: Sakhalin I.: Dolinsk, 6.09.1977, 1 ♂ (Kolomyietz) (SZM).

6.4.2. *Heteronychia* (s. str.) *amica* Peris, González-Mora & Mingo, 1998

Heteronychia amica Peris et al., 1998: 171, 173.

Type locality: MA: Tanger. Holotype: ♂; deposited in UCME.

Heteronychia amica: Lehrer, 2012c: 21; 2013a: 13.

Sarcophaga (Heteronychia) amica: Pape et al., 2002: 219.

Sarcophaga (Heteronychia) tangerensis Whitmore, 2011: 6 (unnecessary new name for *H. amica*).

Distribution: North Africa: MA.

6.4.3. *Heteronychia* (s. str.) *anatolica* (Whitmore, 2011), **n. comb.**

Sarcophaga (*Heteronychia*) *anatolica*: Whitmore, 2011: 7.

Type locality: TR: Ankara, 25 km S, Beynam Forest, 1450 m a. s. l. Holotype: ♂; deposited in ZMUC.

Sarcophaga (*Heteronychia*) *anatolica*: Koçak, 2014: 349; Koçak & Kemal, 2013: 137; Pekbey & Hayat, 2011: 3.

Distribution: Asia: Mid East (TR).

6.4.4. *Heteronychia* (s. str.) *ancilla* (Rondani, 1865)

Sarcophaga ancilla Rondani, 1865: 226.

Type locality: IT: Parma. Holotype: ♂; deposited in MZUF.

Sarcophaga ancilla: Séguy, 1941: 74.

Sarcophaga (*Heteronychia*) *ancilla*: Pape, 1988: 6; 1996: 323, partly; Pape et al., 2002: 219; Richet et al., 2011: 28, 89, 90, 100, 127; Whitmore, 2011: 17.

Bercaea ancilla: Enderlein, 1928: 51.

Heteronychia (s. str.) *ancilla*: Verves, 1986: 151, partly.

Heteronychia ancilla: Lehrer, 2012b: 3; Peris et al., 1998: 175, 176.

Sarcophaga penultima Böttcher, 1913b: 182. Type locality: IT. Holotype: ♂; deposited in MZUF.

Heteronychia iubitata Lehrer, 1999: 410. Type locality: FR: Provence, Lagnes. Holotype: ♂; deposited in TAU.

Heteronychia iubitata: Lehrer 2006d: 14.

Spatulapica lucentina Lehrer & Martínez-Sánchez, 2001: 221, Type locality: ES: Alicante, Sierra Salinas (Villena), 0°53'38" W, 38°38'32" N. Holotype: ♂; deposited in DCAA.

Spatulapica dentiphalla Lehrer, 2012b: 3; **n. syn.** Type locality: not given.

Material examined: CH: Valais, 22.05.1962, 1 ♂ (Beamont) (UNS).

Distribution: Europe: CH, ES, FR (continental), IT (continental).

Description of ♂ *Spatulapica dentiphalla* is based at drawings of ♂ genitalia of *H. ancilla* from Whitmore (2011: 18, figs 45-46). The differences from another's drawings of ♂ genitalia of *H. ancilla* (Séguy, 1941: 74-75, figs 74-75; Peris et al., 1998: 176, fig. 10; Richet et al., 2011: 208, pl. 017; etc.) are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

6.4.5. *Heteronychia* (s. str.) *ancilloides* (Baranov, 1927)

Sarcophaga ancilloides Baranov, 1927: 41.

Type locality: MK: Kisela Voda nr Skopje. Holotype: ♂; deposited in USNM.

Sarcophaga ancilloides: Sabrosky & Crosskey, 1970: 430; Séguy, 1941: 74.

Sarcophaga (*Heteronychia*) *ancilloides*: Pape, 1996: 323; Whitmore, 2011: 51.

Asceloetis ancilloides: Baranov, 1942: 633.

Heteronychia (s. str.) *ancilloides*: Verves, 1986: 151.

Distribution: Europe: MK.

6.4.6. *Heteronychia* (s. str.) *armeniaca* (Rohdendorf, 1937)

Pierretia (*Heteronychia*) *armeniaca* Rohdendorf, 1937: 355.

Type locality: AM: Delizhan. Holotype: ♂; deposited in ZIN.

Heteronychia armeniaca: Verves, 1978b: 42.

Heteronychia (s. str.) *armeniaca*: Verves, 1986: 151.

Sarcophaga (*Heteronychia*) *armeniaca*: Pape, 1996: 323; Whitmore, 2011: 50.

Heteronychia conficta Lehrer, 2013: 5, **n. syn.** Type locality: not given.

Distribution: Asia: Mid East (TR), Transcaucasia (AM, AZ).

Description of ♂ *Spatulapica conficta* is based at drawings of ♂ genitalia of *H. amica* from Whitmore (2011: 50, pl. 7). The differences from drawings of ♂ genitalia of *H. amica* (Rohdendorf 1937: 356, figs. 485, 486) are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: AM: Vedi District, Asni, 5.08.1965, 4 ♂, 2 ♀ (Richter) (ZIN).

6.4.7. *Heteronychia* (s. str.) *belanovskyi* Verves, 1973

Heteronychia (s. str.) *belanovskyi* Verves, 1973: 946.

Type locality: UA: Zaporizzhya Region: Zhdanov [now: Berdyansk]. Holotype: ♂; deposited in SIZK.
Heteronychia (s. str.) *belanovskyi* Verves & Khrokalo, 2014a: 20.
Sarcophaga (*Heteronychia*) *belanovskyi*: Whitmore, 2011: 19.
Spatulapica belanovskyi: Lehrer, 2012b: 6.
Heteronychia povolnyi Mihályi, 1975: 104. Type locality: HU: Budapest, Csillebérc. Holotype: ♂; deposited in HNHM.
Pierretia (*Heteronychia*) *ancilla* (misidentification: not *Sarcophaga ancilla* Rondani, 1865: 226): Rohdendorf, 1937: 355.
Heteronychia ancilla: Rohdendorf, 1970: 669; Verves, 1978b: 42.
Heteronychia (s. str.) *ancilla*: Povolný, 1996: 106; 1997b: 99; Povolný & Verves, 1997: 164; Verves, 1986: 151.
Heteronychia (*Eupierretia*) *ancilla*: Povolný & Verves, 1990: 297.
Spatulapica porziana Lehrer, 2012b: 6, **n. syn.** Type locality: not given.
Distribution: Europe: BG, CZ (Moravia), GR, HU, RO, RS, RU (Voronezh Region), SK, UA.
Asia: Transcaucasia (AZ, GE).

Description of ♂ *Spatulapica porziana* is based at drawings of ♂ genitalia of *Sarcophaga belanovskyi* from Whitmore (2011: 18, figs 47–48). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

6.4.8. *Heteronychia* (s. str.) *benaci* (Böttcher, 1913)

Sarcophaga benaci Böttcher, 1913a: 247.

Type locality: IT: Trentino Alto Adige, Rovereto. Lectotype: ♂ (designated by Whitmore 2011, p. 20); deposited in FNS.

Sarcophaga benaci: Baranov, 1929: 151; Séguy, 1941: 79.

Sarcophaga (*Heteronychia*) *benaci*: Menzel & Ziegler, 2002: 390; Pape, 1996: 335; Richet et al., 2011: 94; Whitmore, 2011: 20.

Boettcherella benaci: Enderlein, 1928: 49.

Pierretia (*Heteronychia*) *benaci*: Rohdendorf, 1937: 352.

Hartigia benaci: Baranov, 1942: 616.

Heteronychia (s. str.) *benaci*: Povolný & Verves, 1990: 298; Verves, 1986: 151.

Heteronychia (*Spatulapica*) *benaci*: Povolný, 1994: 189;

Heteronychia benaci: Lehrer, 2012b: 7; Lehrer & Oprisan, 2013: 23.

Sarcophaga benaci var. *tenuiforceps* Böttcher, 1913a: 248. Type locality: IT: Trentino Alto Adige: Rovereto.

Lectotype: ♂ (designated by Whitmore, 1911: 20); deposited in SMF.

Sarcophaga benaci var. *tenuiforceps*: Séguy, 1941: 80.

Pierretia (*Heteronychia*) *tenuiforceps*: Rohdendorf, 1937: 353; Pape, 1996: 335.

Heteronychia (s. str.) *tenuiforceps*: Verves, 1986: 154.

Heteronychia (s. str.) *vachai* Povolný, 1986: 233. Type locality: HR: Dalmatia, Biokovo Mts., Čerešnik. Holotype: ♂; deposited in MMBC.

Sarcophaga (*Heteronychia*) *vachai*: Pape, 1996: 335.

Heteronychia garda Lehrer, 2012b: 7, **n. syn.** Type locality: not given.

Pierretia (*Heteronychia*) *bezziana*: Rohdendorf, 1937: 347, 349; misidentification: not *Sarcophaga bezziana* Böttcher, 1913.

Heteronychia (s. str.) *bezziana*: Povolný & Verves, 1990: 298; 1997: 163, 166; Verves, 1986: 151.

Heteronychia bezziana: Pape, 1987: 135; Povolný, 1989: 144; 1994: 188; 1997b: 99;

Sarcophaga bezziana: Schembri et al., 1991: 269.

Sarcophaga (*Heteronychia*) *bezziana*: Draber-Moňko, 2007: 232; Kara & Pape, 2002: 293; Koçak & Kemal, 2013: 137; Menzel & Ziegler, 2002: 390; Pape, 1996: 323; Ziegler & Lange, 2001: 144.

Distribution: Europe: AL, AD, AT, BG, CH, CZ (Moravia), DE, ES, GR, HR, MT, NO, PL, RO, RS, SK, SE; Asia: Mid East (TR).

Larvae are the internal parasitoides of terrestrial snails *Chondrina* sp. and *Clausilia* sp. (Povolný & Verves, 1990).

Description of ♂ *Heteronychia garda* is based at drawings of ♂ genitalia of *Sarcophaga benaci* from Whitmore (2011: 47, figs 69–71). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: DE: Bayern, Dachau, 28.07.1917, 7. & 13.05., 3. 06., 12. & 16.07.1918, 11.05.1920, 3.06.1934, 9 ♂ (Engel); Württemberg, 1872–1876, 1 ♂, (Roser). GR: Olympia, 1 ♂

(Engel) (SMNS). RS: Golubaz (= Golubac), 21.05.1928, 1 ♀ (Wainwright) (BMNH). CH: Auvernier, 16.08.1961, 1 ♂ (Beamont) (UNS).

6.4.9. *Heteronychia* (s. str.) *bezziana* (Böttcher, 1913)

Sarcophaga bezziana Böttcher, 1913a: 242.

Type locality: IT: Abruzzi, L'Aquila prov., Campopericoli. Lectotype: ♂ (designated by Whitmore et al., 2009: 28); deposited in SMF.

Sarcophaga (*Discachaeta*) *bezziana*: Whitmore, 2011: 21; Whitmore et al., 2009: 27.

Shoachaeta bezziana: Lehrer, 2012a: 3.

Shoachaeta cornogranda Lehrer, 2009b: 8. Type locality: IT: Abruzzi, Corno Grande. Type specimen: ♂; based at figs 1-7 after Whitmore et al., 2009: 31.

Shoachaeta cornogranda: Lehrer 2012b: 10.

Distribution: IT (continental).

6.4.10. *Heteronychia* (s. str.) *bulgarica* (Enderlein, 1936)

Helicobia bulgarica Enderlein, 1936: 100.

Type locality: BG: Sliven. Lectotype: ♂ (designated by Pape, 1995: 16); deposited in MNHUB.

Heteronychia bulgarica: Pape, 1995: 16; Povolný, 1997: 99; 2002a: 311; Verves, 2003: 44.

Heteronychia (s. str.) *bulgarica*: Verves, 1998: 52; Verves & Khrokalo, 2014a: 20; 2014b: 21.

Sarcophaga (*Heteronychia*) *bulgarica*: Draber-Moňko, 2007: 232; Gatt & Ebejer, 2014: 110; Pape, 1996: 324; Pape et al., 2002: 219; Pekbey & Hayat, 2011: 5; Richet et al., 2011: 28, 89, 100, 127; Whitmore, 2009: 573; 2011: 23.

Pierretia (s. str.) *boettcheriana* Rohdendorf, 1937: 345. Type locality: UA: Poltava Region: Supoevka.

Lectotype: ♂ (designated by Whitmore et al., 2011: 23); deposited in ZIN.

Sarcophaga boettcheriana: Schembri et al., 1991: 271; Séguy, 1941: 81.

Sarcophaga (*Heteronychia*) *boettcheriana*: Coupland & Baker, 2004: 113.

Heteronychia boettcheriana: Mihályi, 1979: 145; Pape, 1987: 139; Rohdendorf, 1970: 668; Verves, 1978b: 41.

Heteronychia (*Spatulapica*) *boettcheriana*: Povolný, 1986: 237; Verves, 1979: 865; 1986: 155.

Heteronychia (s. str.) *boettcheriana*: Peris et al., 1998: 167; Povolný & Verves, 1997: 168.

Spatulapica boettcheriana: Lehrer, 2012a: 11.

Spatulapica nostalgica Lehrer, 2000a: 36. Type locality: DE: Keiserstuhl. Holotype: ♂; deposited in TAU.

Sarcophaga offuscata: Böttcher, 1913a: 244; misidentification: not *Sarcophaga offuscata* Meigen, 1826.

Mulsantia offuscata: Baranov, 1942: 624.

Material examined: GE: Abkhazia: Novy Afon, 19.08.1953, 7 ♂ (Rohdendorf) (YVC). DE: Bayern: Dachau, 29.06.1920, 1 ♂ (Engel) (SMNS). IT: „Triest Xo8 10/7” 1 ♂ (ZSM). LV: Jaunbērze, 18.06.1994, 1 ♂, (Spuris) (LU). RU: Stavropol Region: Essentuky City, Valley of Podkumok River, 11.06.1960, 1 ♂ (Tanasiychuk) (ZIN). SK: Revaň lúky, 4.06.1957, 1 ♂ (Slamečková) (YVC). CH: Valais: Branson, 26.07.1961, 1 ♂ (Beamont) (UNS).

Distribution: Europe: AT, BG, BU, CH, CZ, DE, DK, ES, FR (continental & Corsica), HR, HU, IT (continental, Sardinia & Sicily), LV*, MD, MT, NO, PL, PT, RO, RU (Bashkortostan & Perm Regions), SK, SE, UA; Asia: Mid East (TR), North Caucasus: RU (Kabardino-Balkaria, Karachay-Cherkessia & Stavropol* Regions), Transcaucasia.

Larvae bred from terrestrial snail (Povolný & Verves, 1990).

6.4.11. *Heteronychia* (s. str.) *chaetoneura* Brauer & Bergenstamm, 1889

Heteronychia chaetoneura Brauer & Bergenstamm, 1889: 168.

Type locality: AT: Pitten. Lectotype: ♂ (designated by Blackith et al., 2004: 11); deposited in NMW.

Heteronychia chaetoneura: Séguy, 1941: 81.

Heteronychia (s. str.) *chaetoneura*: Verves & Khrokalo, 2014a: 21; 2014b: 21.

Sarcophaga (*Heteronychia*) *chaetoneura*: Blackith et al., 2004: 1; Richet et al., 2011: 28, 95, 101, 128.

Distribution: Europe: AT, BU*, DE, FR (continental), GR (continental)*, HU*, IT (continental)*, LV*, SK*, UA.

Material examined: BU: Brest Region: Belovezhskaya Pushcha, 14.07.1961, 1 ♂ (Narchuk) (ZIN). DE: Baden-Württemberg: Benningen, 17.05.1936, 1 ♂, (Vogel); Feuerbach Wald, 10.09.1976, 1 ♂; Schwabische Alb, Lothen, 2.06.1954, 2 ♂ (Lindner); Württemberg, 1872-1876, 4 ♂ (Roser); Bayern: Allgau Alps, Aggenstein, 18.06.1932, 1 ♂ (Lindner); Mt. Dojsmer, 1679 m a. s. l.,

bei Hinterstein, 2.08.1921, 1 ♂; Dahau, 3.05.-3.08.1918 & 16.06.1920, 6 ♂ (Engel); Hocheck bei Obersdorf, 4.09.1966, 1 ♂; Lunz, Nd. Donau, 26.07. & 4.08.1940, 2 ♂. GR: Volvi See, 5.05.1968, 1 ♂ (Lindner). HU: 1 ♂ & 1 ♀ in copula, Tatarszentgyorgy, 06.1925 (Engel). IT: Prov. Padua: Abano, 09.1957, 1 ♂ (Lindner) (SMNS). LV: Engure, 20.06.2004, 1 ♂; Kuivīži Randu pl., 27.06.2011, 1 ♀; Lielpurvs kariers, 20.06.1991, 1 ♀ (Karpa) (LU). SK: Racibor-Orava, 2.09.1958, 1 ♂ (Slamečková) (YVC).

6.4.12. *Heteronychia* (s. str.) *chiquita* Peris, González-Mora & Mingo, 1998

Heteronychia chiquita Peris et al., 1998: 175.

Type locality: ES: Zaragoza, Pina de Ebro. Holotype: ♂; deposited in MMS.

Sarcophaga (*Heteronychia*) *chiquita*: Pape et al., 2002: 219; Richet et al., 2011: 89; Whitmore, 2011: 18, 24.

Heteronychia morenita Peris et al., 1998: 176. Type locality: ES: Sevilla, Morón. Holotype: ♂; deposited in MMS.

Sarcophaga (*Heteronychia*) *morenita*: Pape et al., 2002: 219.

Distribution: Europe: ES.

6.4.13. *Heteronychia* (s. str.) *clarahenae* Lehrer, 1999

Heteronychia clarahenae Lehrer, 1999: 412.

Heteronychia clarahenae: Lehrer, 2006c: 17.

Sarcophaga (*Heteronychia*) *clarahenae*: Pekbey & Hayat, 2011: 5.

Type locality: IL: Sihron Jaakov Jaakov [= Zichron Ya'akov]. Holotype: ♂; deposited in TAU.

Distribution: Asia: Mid East (IL, TR), Transcaucasia (AZ).

6.4.14. *Heteronychia* (s. str.) *consanguinea* (Rondani, 1860)

Sarcophaga consanguinea Rondani, 1860: 392.

Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 6); deposited in MZUF.

Sarcophaga consanguinea: Hayat et al., 2008: 389; Séguy, 1941: 88.

Sarcophaga (*Heteronychia*) *consanguinea*: Koçak, 2014: 349; Koçak & Kemal, 2013: 138; Pape, 1988: 6; 1996: 325; Richet et al., 2011: 28, 94, 101, 128; Whitmore, 2009: 57; 2009: 572; 2011: 24.

Pierretia (*Eupierretia*) *consanguinea*: Rohdendorf 1937: 371.

Ctenodasyptigia consanguinea: Baranov, 1942: 595.

Heteronychia consanguinea: Mihályi, 1979: 151; Povolný, 2003: 19; Rohdendorf, 1970: 670.

Heteronychia (*Eupierretia*) *consanguinea*: Verves, 1986: 149.

Heteronychia (s. str.) *consanguinea*: Verves & Khrokalo, 2014a: 21.

Sarcophaga schnabli Villeneuve, 1911: 128. Type locality: FR: Corsica, Campo di l'Oro. Lectotype: ♂ (designated by Pape, 1995: 27); deposited in SMNS.

Sarcophaga schnabli: Böttcher, 1913a: 354; Séguy, 1941: 142.

Sarcophaga (*Heteronychia*) *schnabli*: Pape, 1995: 27; 1996: 333.

Dasyptigia schnabli: Enderlein, 1928: 40.

Pierretia (*Eupierretia*) *schnabli*: Rohdendorf, 1937: 371.

Heteronychia (*Eupierretia*) *schnabli*: Verves, 1986: 150.

Heteronychia schnabli: Povolný, 2003: 19.

Sarcophaga rondanii Böttcher, 1913a: 355, 372; unnecessary new name for *Sarcophaga consanguinea* Rondani, 1860.

Sarcophaga rondanii: Rohdendorf, 1932: 21.

Dasyptigia rondanii: Enderlein, 1928: 40; Baranov, 1942: 598.

Pierretia (*Eupierretia*) *portschinskyana* Rohdendorf, 1937: 373. Type locality: UA: Crimea: environs of Mukholatka. Holotype: ♂; deposited in ZIN.

Heteronychia portschinskyana: Lehrer, 2006c: 17; Povolný & Znojil, 1999: 195; Rohdendorf, 1970: 670; Verves, 1978b: 42; 1998: 53.

Heteronychia (*Eupierretia*) *portschinskyana*: Nandi, 2002: 520; Povolný, 1996: 104; Povolný & Verves, 1990: 296; Verves, 1986: 150.

Sarcophaga (*Heteronychia*) *portschinskyana*: Coupland & Baker, 2004: 114; Pape, 1996: 332.

Heteronychia atanassovi Lehrer, 1977a: 31. Type locality: BG: Mt. Ali Botush. Holotype: ♂; deposited in SOFM.

Heteronychia cullottorum Povolný, 2005: 103. Type locality: IT: Sicily: Pizzo St. Angelo. Holotype: ♂; deposited in MMBC.

Distribution: Palaearctic: Europe: BG, HR, FR (continental & Corsica), GR (continental & Rhodos I.), IT (continental, Sardinia & Sicily), RS, UA (Crimea); Asia: Mid East (IL, SY, TR, PS), North Caucasus: RU (Karachay-Cherkessia, Krasnodar & Stavropol Regions); North Africa: DZ. Oriental: Pakistan (North-West Frontier).

Larvae are the parasitoids of terrestrial snail *Theba pisana* (Coupland & Baker 2004).

Material examined: GR: "Eubaea", 1 ♂, (Krüper) (SMNS). IL: Jerusalem, Scopusberg, 29.07.1931, 1 ♂ (Aharoni). IT: Umbria: Massiccio Sibillini, 2000 m a. s. l., 19.07.1918, 1 ♂ (Quarel) (BMNH); Alussio: Riviera, 6.09.1960, 2 ♂ (Lindner); Sicily: Lipari, 05.1921, 2 ♂ (Neuhaus); [Sicily] Taormina, 04.1921, 1 ♂, 1 ♀ (Trautman) (SMNS).

6.4.15. *Heteronychia* (s. str.) *curvifemoralis* Li, 1980

Heteronychia (*Eupierretia*) *curvifemoralis* Li, 1980: 276.

Type locality: CN: Sichuan, Ebian. Holotype: ♂; deposited in SMCC.

Heteronychia (*Eupierretia*) *curvifemoralis*: Fan, 1992: 655; Verves, 1986: 149; Wei et al., 1988: 311.

Heteronychia curvifemoralis: Fan & Pape, 1996: 249.

Sarcophaga (*Heteronychia*) *curvifemoralis*: Pape, 1996: 325; Whitmore, 2011: 26.

Heteronychia (*Eupierretia*) *spatulifera* Chen & Lu 1981, in Wand et al., 1981: 256, 258. Type locality: CN: Quinghai, Yushu. Holotype: ♂; deposited in IEAS.

Heteronychia (*Eupierretia*) *spatulifera*: Fan, 1992: 655.

Heteronychia spatulifera: Fan & Pape, 1996: 250.

Sarcophaga (*Heteronychia*) *spatulifera*: Pape, 1996: 334.

Spatulapica spatulifera: Lehrer, 2013d: 20.

Spatulapica avesania Lehrer, 2013d: 20, **n. syn.** Type locality: not given.

Distribution: Palaearctic: Asia: CN (Quinghai, Shanxi, Sichuan); Oriental Region: CN (Guangxi, Guizhou).

Description of ♂ *Spatulapica avesania* is based at drawings of ♂ genitalia of *H. curvifemoralis* by Whitmore (2010: 58, pl. 29). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

6.4.16. *Heteronychia* (s. str.) *depressifrons* (Zetterstedt, 1845) (Figs 26-28)

Sarcophaga depressifrons Zetterstedt, 1845: 1293.

Type locality: SE: Skåne. Lectotype: ♂ (designated by Pape, 1986b: 307); deposited in MZLU.

Sarcophaga depressifrons: Pape & Merz, 1998: 400.

Sarcophaga (*Heteronychia*) *depressifrons*: Draber-Moňko, 2007: 232; Gatt & Ebejer, 2014: 109; Menzel & Ziegler, 2002: 390; Pape, 1996: 307; Pohjoismäki & Kahanpää, 2014: 389; Richet et al., 2011: 28, 88, 100, 128; Whitmore, 2011: 26.

Heteronychia (s. str.) *depressifrons*: Povolný, 1997: 99; Povolný & Verves, 1990: 299; 1997: 170; Verves, 1998: 53; Verves & Khrokalo, 2014a: 21; 2014b: 21.

Heteronychia depressifrons: Fan & Pape, 1996: 249; Kejval, 1998: 63; Khrokalo & Verves, 2009: 117; Lehrer, 2006d: 14; 2009a: 10; Lehrer, 2012a: 7; Rudzinski & Flügel, 2007: 64; Verves & Khrokalo, 2006: 146; Zhang et al., 2010: 358.

Pierretia (s. str.) *obscurata* Rohdendorf, 1937: 346. Type locality: "Dübova" (probably SK). Lectotype: ♂ (designated by Whitmore, 2011: 27); deposited in ZIN.

Pierretia (s. str.) *obscurata*: Baranov, 1941: 374.

Heteronychia obscurata: Artamonov, 1980a: 31; Kano et al., 1967: 25; Kano & Kurahashi, 1999: 73; Lehrer, 2006d: 14; Lopes et al., 1977: 579; Mihályi, 1979: 145; Rohdendorf, 1970: 667.

Heteronychia (*Spatulapica*) *obscurata*: Verves, 1979: 862, 867; 1986: 157.

Sarcophaga (*Heteronychia*) *obscurata*: Pape, 1996: 307.

Spatulapica obscurata: Lehrer, 2009a: 10.

Sarcophaga parva Quo, 1952: 67 (Junior primary homonym of *Sarcophaga parva* Walker, 1853: 321). Type locality: CN: "near Shanghai". Holotype: ♂; deposited in IEAS.

Heteronychia quoi Fan, 1964: 313, 318 (new name for *Sarcophaga parva* Quo, 1952).

Heteronychia quoi: Fan, 1992: 652; Feng, 2011: 548; Kano & Kurahashi, 1999: 73.

Heteronychia (*Spatulapica*) *quoi*: Verves, 1979: 862, 867.

Spatulapica quoi: Lehrer, 2009a: 12.

- Heteronychia (Spatulapica) ukrainica* Verves, 1975: 667. Type locality: UA: Dnipropetrovsk Region: Kremienne Village. Holotype: ♂; deposited in SIZK.
- Heteronychia (Spatulapica) ukrainica*: Verves, 1979: 862, 867; 1986: 157.
- Heteronychia (Spatulapica) petrovae* Artamonov, 1980b: 151. Type-locality: RU: Far East, Primorye, 5 km E from Ussuriysk. Holotype: ♂; deposited in SZM.
- Heteronychia compactilobata* Wyatt, 1991: 2. Type locality: Great Britain: England, Dorset, Coombe Keynes Wood. Holotype: ♂; deposited in BMNH.
- Sarcophaga (Heteronychia) compactilobata*: Pape, 1996: 324.
- Sarcophaga offuscata*: Collins, 1926: 60; Schiner, 1862: 572; misidentification: not *Sarcophaga offuscata* Meigen, 1826.
- Pierretia (s. str.) offuscata*: Baranov, 1941: 374.
- Sarcophaga offuscata* forma "ano nigra": Böttcher, 1913a: 244.
- Sarcophaga rondaniana*: Séguy, 1941: 88; misidentification: not *Pierretia rondaniana* Rohdendorf, 1937.
- Heteronychia rondaniana*: Mihályi, 1979: 148.

Distribution: Palaearctic: Europe: AL, AT, BE, BG, BU, CH, CZ, DE, DK, ES, FI, FR (continental), GR, HR, HU, IT (continental), MK, MT, NL, NO, PL, RO, RS, RU (Ivanovo, Leningrad & Perm* Regions), SE, SK, UA, UK (England); Asia: North Caucasus: RU (Karachay-Cherkessia); West Siberia: RU (Tyumen); Far East: CN (Beijing, Jiangsu, Liaoning, Shanghai, Sichuan), JP (Kyushu), KP, KR, RU (Primorye). Oriental Region: CN (Guangdong, Guizhou, Guangxi), JP (Ryukyu Is.).

This species reared in the laboratory on freshly killed snails (Richet et al. 2011).

Material examined: CN: Changhai, 18.10.1950, 1 ♂ (Quo) (YVC). HU: Palatinus Lake, 06.1925, 1 ♀ (Engel) (ZSM). IT: Garda See, 11.07.1956, 1 ♂ (Lindner). DE: [Bayern] Allgäu, Osterachtal, 1050 m a. s. l., 17.06.1924, 1 ♂ (Engel) (SMNS); „Bav. merid.“, Tutzing, 26.06.1947, 1 ♂ (ZSM). RU: Perm Region: Kungur, 28.08.1958, 1 ♂ (Borisova) (YVC). CH: Neuchâtel: Montmollin, 11.08.1962, 1 ♂ (Beamont) (UNS).

6.4.17. *Heteronychia (s. str.) dissimilis* (Meigen, 1826)

Sarcophaga dissimilis Meigen, 1826: 25.

Type locality: Europe (probably DE). Lectotype: ♂ (designated by Blackith et al., 2004: 9); deposited in MNHN.

Sarcophaga dissimilis: Böttcher, 1913a: 250; Blackith et al., 2004: 8; Séguy, 1941: 97.

Sarcophaga (Heteronychia) dissimilis: Coupland & Baker, 2004: 113; Draber-Moňko, 2007: 232; Pape, 1996: 326; 2004: 29; Pape et al., 2002: 219; Richet et al., 2011: 29, 95, 101, 129; Whitmore, 2011: 28.

Pierretia dissimilis: Enderlein, 1928: 48.

Pierretia (Heteronychia) dissimilis: Rohdendorf, 1937: 349.

Mulsantia dissimilis: Baranov, 1942: 621.

Heteronychia (s. str.) dissimilis: Mihályi, 1975: 107; Povolný, 1997: 99; Povolný & Staněk, 1969: 186; Povolný & Verves, 1990: 298; 1997: 170; Rohdendorf, 1975: 199; Verves, 1986: 152; Verves & Khrokalo, 2014a: 22; 2014b: 21.

Heteronychia dissimilis: Kejval, 1998: 63; Lehrer, 1996a: 99; 2006b: 1; Mihályi, 1979: 147; Pape, 1987: 139; Peris et al., 1998: 169; Rohdendorf, 1970: 669; Verves, 1990: 584, 594; Verves & Khrokalo, 2006: 147.

Sarcophaga offuscata Meigen, 1826: 25. Type locality: "Valenier". Lectotype: ♂ (designated by Blackith et al., 2004: 10); ♂ deposited in MNHN.

Myophora arvensis Robineau-Desvoidy, 1830: 358. Type-locality: FR: Saint-Sauveur near Paris. Type material lost.

Myophora obscuripennis Robineau-Desvoidy, 1830: 359. Type-locality: FR: Paris. Type material lost.

Myophora nigricans Robineau-Desvoidy, 1830: 360. Type-locality: FR: Saint-Sauveur near Paris. Type material lost.

Myophora fuscipennis Robineau-Desvoidy, 1830: 361. Type-locality: FR: Saint-Sauveur near Paris. Type material lost.

Myophora grisea Robineau-Desvoidy, 1830: 361 [Junior primary homonym of *Myophora grisea* Robineau-Desvoidy, 1830: 353]. Type-locality: FR: Paris. Type material lost.

Myophora nana Robineau-Desvoidy, 1830: 361. Type-locality: FR: Paris. Type material lost.

Nyctia trifaria Robineau-Desvoidy, 1830: 263. Type-locality: Europe: probably FR. Type material lost.

Phorella despecta Robineau-Desvoidy, 1830: 363. Type-locality: FR: Paris. Type material lost.

Nyctia trifasciata Macquart, 1835: 174. Type-locality: FR: Bordeaux. Holotype: ♂; deposited in MNHN.

Sarcophaga infantula Rondani, 1860: 390. Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 9); deposited in MZUF.

Sarcophaga infantula: Blackith et al., 2004: 10.

- Erichsonia nigricauda* Robineau-Desvoidy, 1863: 494. Type-locality: FR: environs of Paris. Type material lost.
- Erichsonia cursoria* Robineau-Desvoidy, 1863: 494. Type-locality: FR: environs of Paris. Type material lost.
- Erichsonia viatrix* Robineau-Desvoidy, 1863: 495. Type-locality: FR: environs of Paris. Type material lost.
- Erichsonia hilaris* Robineau-Desvoidy, 1863: 496. Type-locality: FR: environs of Paris. Type material lost.
- Erichsonia infuscata* Robineau-Desvoidy, 1863: 497. Type-locality: FR: environs of Paris. Type material lost. Robineau-Desvoidy, 1863: 498, *Erichsonia* [new name for *Myophora grisea* Robineau-Desvoidy, 1830: 361].
- Erichsonia morio* Robineau-Desvoidy, 1863: 499. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia sistoria* Robineau-Desvoidy, 1863: 522. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia flavescens* Robineau-Desvoidy, 1863: 522. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia opaca* Robineau-Desvoidy, 1863: 523. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia concolor* Robineau-Desvoidy, 1863: 523. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia claripennis* Robineau-Desvoidy, 1863: 524 [Junior secondary homonym of *Nyctia claripennis* Robineau-Desvoidy, 1830: 263]. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia villana* Robineau-Desvoidy, 1863: 524. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia myoidea* Robineau-Desvoidy, 1863: 525. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia grisella* Robineau-Desvoidy, 1863: 525 [Junior secondary homonym of *Erichsonia grisea* Robineau-Desvoidy, 1863: 498]. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia socia* Robineau-Desvoidy, 1863: 526. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia sordida* Robineau-Desvoidy, 1863: 527. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia tristis* Robineau-Desvoidy, 1863: 527. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia fuscipennis* Robineau-Desvoidy, 1863: 528 [Junior secondary homonym of *Myophora fuscipennis* Robineau-Desvoidy, 1830: 361]. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia tenella* Robineau-Desvoidy, 1863: 529. Type-locality: FR: environs of Paris. Type material lost.
- Hartigia lugubris* Robineau-Desvoidy, 1863: 529. Type-locality: FR: environs of Paris. Type material lost.
- Sarcophaga dissoluta* Pandellé, 1896: 201. Lectotype: ♂ (designated by Pape, 2004: 29): ♂; RU: [Kaliningrad Region] Sosnovka (as "Prusse orientale"). Deposited in MNHN.
- Sarcophaga dissoluta*: Blackith et al. 2004: 11.
- Heteronychia dimioniphalla* Lehrer, 1996a: 102. Type locality: not given.
- Heteronychia dimioniphalla*: Lehrer, 2006b: 1.
- Heteronychia phallandina* Lehrer, 2013a: 9, **n. syn.** Type locality: not given.
- Distribution: Europe: AL, AT, BE, BG, BU, CH, CZ (Bohemia & Moravia), DE, ES, FR (continental), HR, HU, IT (continental), LT, LV, MD, MK, NL, PL, RO, RS, RU (Arkhangelsk, Ivanovo, Kaliningrad, Moscow, Perm, StPetersbourg and Voronezh Regions), SK, UA, UK; Asia: Mid East: CY; West Siberia: RU (Tyumen); Far East: RU (Primorye & Sakhalin I.).
- Larvae are parasitoids of terrestrial snails *Arianta arbustorum*, *Brachybaena fruticum*, *Monachoides incarnata* (Verves & Khrokalo 2006); reared in the laboratory on freshly killed snails (Richet et al. 2011).
- Description of ♂ *Heteronychia phallandina* is based at drawings of ♂ genitalia of *Sarcophaga dissimilis* by Blackith et al. (2004: 5, figs 1-4, 9) and Whitmore (2010: 58, pl. 29). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.
- Material examined: AT: Tirol, Namlos, 07.1937, 1 ♂ (Engel) (SMNS). CZ: South Moravia, Lanžhot-Soutok floodplain meadows, 14.07.1992, 1 ♂, 1 ♀ (Vaňhara) (YVC). ES: Luunja, Kabina, 16.06.1973, 1 ♂; Tartu, Aune, 22.06.1980, 1 ♂; Vihasoo, 7.07.1980, 1 ♂ (Elberg) (EIZB). DE: Baden-Württemberg, 1872-76, 1 ♂ (Roser); Bauern: Allgäu, Osterhofen, 1050 m a. s. l., 17.06.1924, 1 ♂; Dahau an durrem Gras, 15.04.1918, 1 ♂; Tegernsee, 2.06.1917, 1 ♂ (Engel) (SMNS). RU: Lipetsk Region: Elets District, Ryabinky Village, bank of Vorgol River, meadow, 07.1972, 2 ♂ (Negrobov); Perm Region: Kungur, 3.06. & 12.07.1957, 24.VI.1960, 3 ♂ (Borisova) (YVC).
- 6.4.18. *Heteronychia* (s. str.) *enderleini* (Jacentkovský, 1937)
- Sarcophaga enderleini* Jacentkovský, 1937: 21.
- Type locality: BG: Bačkovo. Holotype: ♂; deposited in CNMP.
- Sarcophaga* (*Heteronychia*) *enderleini*: Pape, 1996: 307; Richet et al., 2011: 93; Whitmore, 2011: 29.
- Heteronychia* (s. str.) *enderleini*: Povolný & Staněk, 1969: 184.
- Heteronychia* (*Eupierretia*) *enderleini*: Povolný & Verves, 1990: 295.

Heteronychia (Eupierretia) macedonica Povolný, 1996: 94, Type locality: GR: Paralia: St. Panteleimon. Holotype: ♂; deposited in MMBC.

Heteronychia macedonica: Povolný & Znojil, 1999: 195.

Sarcophaga (Heteronychia) macedonica: Richet et al. 2011: 94.

Material examined: GR: Paralia: St. Panteleimon, 26.08.1993, 1 ♂ (Povolný) (Paratype of *Heteronychia macedonica* Povolný, 1996: 94; deposited in IEEU).

Distribution: Europe: BG, GR (continental), IT (continental).

6.4.19. *Heteronychia (s. str.) gabrielei* (Whitmore, 2009), **n. comb.**

Sarcophaga (Heteronychia) gabrielei Whitmore, 2009: 572, 575.

Type locality: IT: Sardegna: Carbonia-Iglesias Prov.: Iglesias, Conca Margiani. Holotype: ♂; deposited in CNBFVR.

Sarcophaga (Heteronychia) gabrielei: Richet et al., 2011: 92.

Distribution: Europe: IT (Sardinia).

6.4.20. *Heteronychia (s. str.) gallica* (Whitmore, Richet, Pape & Blackith, 2009).

Sarcophaga (Heteronychia) gallica Whitmore et al., 2009: 37.

Type locality: FR: Hautes Alpes: Villaron Bas SE St-Crépin (Vallée de la Durance), 44°42'18 N, 006°36'83 E. Holotype: ♂; deposited in NHRM.

Sarcophaga (Heteronychia) gallica: Richet et al., 2011: 29, 88, 91, 102, 131.

Heteronychia gallica: Lehrer, 2009d: 9.

Distribution: Europe: FR (continental).

6.4.21. *Heteronychia (s. str.) gigas* (Povolný, 1986).

Discachaeta gigas Povolný, 1986: 230.

Type locality: HR: Dalmatia, Biokovo Mts., Čerešnik above Makarska. Holotype: ♂; deposited in MMBC.

Heteronychia (Eupierretia) gigas: Povolný, 1986: 236; 1992: 182; 1996: 103.

Heteronychia gigas: Povolný & Znojil, 1999: 195.

Sarcophaga (Heteronychia) giganta Pape, 1996: 328, **n. syn.**; unnecessary new name for *H. gigas*.

Sarcophaga (Heteronychia) giganta: Richet et al., 2011: 90; Whitmore, 2011: 34.

Distribution: Europe: HR.

Larvae are parasitoides of terrestrial snail *Eobania vermiculata* (Povolný, 1992).

Material examined: HR: Dalmatia, Biokovo Mts., Čerešnik above Makarska, 19.06.1985, "Typus" ([Paratype ?], 1 ♂ (Povolný) (YVC).

6.4.22. *Heteronychia (s. str.) haemorrhhoa* (Meigen, 1826)

Sarcophaga haemorrhhoa Meigen, 1826: 29.

Type locality: Europe (probably DE). Lectotype: ♂ (designated by Whitmore, 2011: 34): ♂; deposited in MNHN.

Sarcophaga haemorrhhoa: Böttcher, 1913a: 240; Pape & Merz, 1998: 400; Patton & Wainwright, 1936: 187; Séguy, 1941: 104.

Sarcophaga (Heteronychia) haemorrhhoa: Coupland & Baker, 2004: 113, 124; Draber-Moňko, 2007: 232; Giroux et al., 2010: 771; Kara & Pape, 2002: 294; Pape, 1995: 19; 1996: 328; Koçak, 2014: 349; Koçak & Kemal, 2013: 138; Pape et al. 2002: 219; Pohjoismäki & Kahanpää, 2014: 389; Rudzinski, 2000: 199; Richet et al., 2011: 29, 87, 100, 131; Whitmore, 2009: 572; 2011: 34.

Myophora contempta Robineau-Desvoidy, 1830: 343. Type locality: FR: Saint-Sauveur nr Paris. Type material lost.

Myophora aesto4alis Robineau-Desvoidy, 1830: 344. Type locality: FR: Paris. Type material lost.

Myophora riparia Robineau-Desvoidy, 1830: 345. Type locality: FR: Yonne nr Auxerre. Type material lost.

Myophora albicans Robineau-Desvoidy, 1830: 345. Type locality: FR: Paris. Type material lost.

Sarcophaga sanguinolenta Macquart, 1835: 2. Type locality: FR: Bordeaux. Holotype: ♂; deposited in MHNL.

Erichsonia valida Robineau-Desvoidy, 1863: 482. Type locality: FR: nr Paris. Type material lost.

Erichsonia pilosa Robineau-Desvoidy, 1863: 483. Type locality: FR: nr Paris. Type material lost.

Erichsonia campestris Robineau-Desvoidy, 1863: 484. Type locality: FR: nr Paris. Type material lost.

Erichsonia chetalis Robineau-Desvoidy, 1863: 484. Type locality: FR: nr Paris. Type material lost.

- Erichsonia labialis* Robineau-Desvoidy, 1863: 485. Type locality: FR: nr Paris. Type material lost.
Erichsonia oralis Robineau-Desvoidy, 1863: 485. Type locality: FR: nr Paris. Type material lost.
Erichsonia ambulatrix Robineau-Desvoidy, 1863: 486. Type locality: FR: nr Paris. Type material lost.
Erichsonia ardeacea Robineau-Desvoidy, 1863: 486. Type locality: FR: nr Paris. Type material lost.
Erichsonia fuliginosa Robineau-Desvoidy, 1863: 487. Type locality: FR: nr Paris. Type material lost.
Erichsonia musca Robineau-Desvoidy, 1863: 487. Type locality: FR: nr Paris. Type material lost.
Erichsonia rustica Robineau-Desvoidy, 1863: 488. Type locality: FR: nr Paris. Type material lost.
Erichsonia umbripennis Robineau-Desvoidy, 1863: 489. Type locality: FR: nr Paris. Type material lost.
Erichsonia procax Robineau-Desvoidy, 1863: 489. Type locality: FR: nr Paris. Type material lost.
Erichsonia claripennis Robineau-Desvoidy, 1863: 490. Type locality: FR: nr Paris. Type material lost.
Erichsonia varinervis Robineau-Desvoidy, 1863: 491. Type locality: FR: nr Paris. Type material lost.
Erichsonia arborea Robineau-Desvoidy, 1863: 491. Type locality: FR: nr Paris. Type material lost.
Erichsonia inconstans Robineau-Desvoidy, 1863: 491. Type locality: FR: nr Paris. Type material lost.
Erichsonia contigua Robineau-Desvoidy, 1863: 492. Type locality: FR: nr Paris. Type material lost.
Erichsonia flavinervis Robineau-Desvoidy, 1863: 493. Type locality: FR: nr Paris. Type material lost.
Erichsonia anxia Robineau-Desvoidy, 1863: 493. Type locality: FR: nr Paris. Type material lost.
Pierretia haemorrhoea: Baranov, 1941: 373; Enderlein, 1928: 47.
Pierretia (s. str.) *haemorrhoea*: Rohdendorf, 1937: 341.
Heteronychia haemorrhoea: Blackith & Blackith, 1990: 699; Blackith et al., 1994: 427; Kejval, 1998: 63; Mihályi, 1979: 146; Pape, 1987: 136; Rohdendorf, 1970: 688; Rudzinski & Flügel, 2007: 64; Verves, 1990: 584, 596.
Heteronychia (*Spatulapica*) *haemorrhoea*: Verves, 1979: 862, 865; 1986: 155.
Heteronychia (s. str.) *haemorrhoea*: Peris et al., 1998: 167; Povolný, 1997: 99; Povolný & Verves, 1990: 299; 1997: 172; 1998: 53; Verves & Khrokalo, 2014a: 22; 2014b: 21.
Sarcophaga sanguinolenta Macquart, 1835: 2. Type locality: FR: Bordeaux. Holotype: ♂; deposited in MNHN.
Lioplacea helico4orax Enderlein, 1933: 125. Lectotype: ♂ (designated by Pape, 1995: 19); deposited in MNHUB.
Heteronychia fugitiva Povolný, 2000a: 24. Type locality: IT: Sicily: Valle de Corvo (Altavilla, Milicia, Palermo). Holotype: ♂; deposited in MMBC.
Lioplacea helicivoris: Baranov, 1942: 635; erroneous subsequent spelling of *Lioplacea helicivorax* Enderlein, 1933.
Lioplacea helicivora: Verves, 1986: 192; erroneous subsequent spelling of *Lioplacea helicivorax* Enderlein, 1933.
Distribution: Europe: AT, BU, BE, BG, CH, CZ, DE, DK, ES, FI, FR (continental & Corsica), GR, HR, HU, IE, IT (continental, Sardinia & Sicily), LV, MK, NO, PL, RO, RS, RU (Bashkortostan, Ivanovo, Moscow, Leningrad and Voronezh Regions), SE, SK, UA, UK; Asia: Mid East (TR); Transcaucasus (AZ); West Siberia: RU (Novosibirsk Region).
Larvae are parasitoids of terrestrial snails *Cepaea hortensis* (Mik, 1890; Schmitz, 1917), *C. nemoralis* (Enderlein, 1933), *C. vindobonensis* (Verves & Khrokalo, 2014a) and *Helix* sp. (Portschinsky, 1884).
Material examined: BG: V Tyrnovo, Emen, 1970, 1 ♀ (Ganchev) (SOFM). CH: Vaud, Eckhblens, 18.07.1961, 1 ♂ (Beamont) (UNS). DE: [Baden-Württemberg] Rotenacker, 9.06.1935, 1 ♀ (Lindner); [Bayern] Dachau, Himmelreich, 22.06.1919, 1 ♂ [Bayern] Dachauer Moos, 19.06., 9. & 24. 07., 14. & 20. 08.1918, 7 ♂; [Bayern] Kultur, 18.05., 14.07. & 24. 08.1918; 31.05. & 13.06.1919; 15., 18. & 28.05.1920, 8 ♂; [Bayern] Dolster bei Hinterstein, 15. 07.1920, 1 ♀; [Bayern] "Fürth 9.17" & "Fürth IX", 2 ♂ (Engel); [Bayern] Gmünd am Tegernsee, 31.05.1908, 1 ♂, (Streich) (SMNS); Bremen-Vahr, 8. & 25.07.1982, 2 ♂ (Vedder) (SMB); „Seeflof. 1v“, 1 ♂ (ZSM). IT: Padua, Abano, 09.1957, 1 ♂ (Lindner) (SMNS). SK: Nove Zamky District, Čenkov, 15.06.1957, 1 ♂ (Slamečková) (YVC).

6.4.23. *Heteronychia* (s. str.) *haemorrhoides* (Böttcher, 1913)

- Sarcophaga haemorrhoides* Böttcher, 1913a: 245.
Type locality: IT. Holotype: ♂; deposited in FNS.
Sarcophaga haemorrhoides: Pape & Merz, 1998: 400; Schembri et al., 1991: 270; Séguy, 1941: 108.
Sarcophaga (*Heteronychia*) *haemorrhoides*: Draber-Moňko, 2007: 232; Coupland & Baker, 2004: 113, 124; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 329; Pape et al., 2002: 219; Pekbey & Hayat, 2011: 8; Richet et al., 2011: 87; Whitmore et al., 2009: 37; 2011: 37.
Pierretia (s. str.) *haemorrhoides*: Rohdendorf, 1937: 342.

Heteronychia haemorrhoides: Mihályi, 1979: 145 Povolný, 2000: 26; Rohdendorf, 1970: 668; Verves, 1978b: 41; 1990: 584, 596.

Heteronychia (Spatulapica) haemorrhoides: Povolný, 1992: 183; 1994: 189; 1997b: 99; Verves, 1979: 862, 865; 1986: 157.

Heteronychia (s. str.) haemorrhoides: Peris et al., 1998: 167; Povolný & Verves, 1990: 299; 1997: 172; Verves, 1998: 53; Verves & Khrokalo, 2014a: 23; 2014b: 21.

Spatulapica haemorrhoides: Lehrer, 2006: 19; 2009: 27.

Heteronychia wahisi Lehrer, 1976b: 264. Type locality: TR: Hatay (Antakya), Samādad [Samandağ]. Holotype: ♂; deposited in LZG.

Distribution: Europe: AT, BU, BG, CH, CZ, DE, ES, GR, HR, HU, IT (continental), LV*, MD, MK, MT, PL, RO, RS, RU (Bashkortostan, Leningrad, Lypetsk, Perm and Voronezh Regions), SK, UA; Asia: Mid East (IR, IQ*, IL, SY, TR, PS), North Caucasus: RU (Dagestan, Karachay-Cherkesia, Krasnodar & North Osetia Regions), South Siberia: RU (Altai & Krasnoyarsk Regions), Transcaucasia.

The larvae are parasitoids of various terrestrial snails: *Cantareus asperses*, *Cepaea nemoralis*, *Eobania vermiculata* (Berner, 1973; Povolný, 1992; Povolný & Verves 1990; Verves, 1976).

Material examined: GE: Abkhazia: New Athos, 15.10.1932, 1 ♂ (Rohdendorf) (YVC); HU: Pest County, Tatarszentgyörgy, 06.1925, 2 ♂ (Engel) (SMNS). IQ: Hilla, 29.X.1956, 1 ♂ (Ibrahim); Qalat, 17.03.1957, 1 ♂ (Yohnis) (ZSM). LV: Salaspils, 6.06.1996, 1 ♂, 1 ♀; Taurene, 7.-6.2000, 1 ♂; Ziluži purva m., 17.06.1991, 1 ♂ (Karpa & Spuris) (LU). RU: Altai Krai: Biysk, 20.08.1971, 1 ♂ (ZIN); Altai Republic: border of Chulushman River, 18.07.1970, 1 ♂ (Sychevskaya); Buryatia: Baikal Natural Biosphaeric Reserve, "Chum", 10.08.2000, 1 ♂ (Szpila); Krasnodar Region: Sochi City, Khosta, 15.07.1955, 3 ♂ (Tamarina); Mari El: shore of Sura River, 16.07.1959, 1 ♂ (Pavlova) (YVC); Perm Region, Kungur, 31.09.1958, 1 ♂ (Borisova) (ZIN).

6.4.24. *Heteronychia (s. str.) heptapotamica* (Rohdendorf, 1937).

Pierretia (Heteronychia) heptapotamica Rohdendorf, 1937: 357.

Type locality: KZ: environs of Alma-Ata, Child Colony on Bolshaya Almaatinka River. Holotype: ♂; deposited in ZIN.

Heteronychia (s. str.) heptapotamica: Verves, 1986: 157.

Heteronychia heptapotamica: Fan, 1992: 652; Lehrer, 1999: 413; Verves, 1990: 585, 594.

Sarcophaga (Heteronychia) heptapotamica: Pape, 1996: 329.

Heteronychia (s. str.) kasachstanica Verves, 1975: 665. Type locality: KZ: environs of Alma-Ata. Holotype: ♂; deposited in SIZK.

Heteronychia (s. str.) pogrebennyki Verves, 1977b: 351. Type locality: Kyrgyzstan: Ak-Terek, 15 km SW from Arslanbob. Holotype: ♂; deposited in ZIN.

Heteronychia recubophalla Lehrer, 2013b: 4, **n. syn.** Type locality: not given.

Distribution: Asia: CN (Xinjiang), KZ, Mid Asia.

Description of ♂ *Heteronychia recubophalla* is based at drawings of ♂ genitalia of *H. heptapotamica* from Whitmore (2010: 77, pl. 35). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: KZ: 15 km N of Almaty, Medeo, 1000 m a. s. l., 23.IX.1986, 5 ♂, 1 ♀ (Verves) (YVC). KG: Batken Province: Kara-Tube, 26.07.1962, 1 ♂ (Ponomarenko); 10 km N of Laylak, 17.08.1969, 1 ♂ (Pritykina) (YVC); Dzalalabat Region, Chatkal Ridge, Jangy-Jol, lower Karasu River, left high bank, 24.09.1950, 1 ♂; Arkit valley, Khoja-Ata River, 1400 m a. s. l., 30.09. & 4.10.1950, 2 ♂ (Grunin) (ZIN); Terskey Ala-Too Ridge, 2.08.1962, 1 ♂ (Vtorov); Chuy Province: Trans-Ili Alatau, Bogauta Mt., Burgam-sai, 11.06.1962, 1 ♂ (Kulikova); Issuk Kul Province: Akulen Village, 1.07.1953, 1 ♂ (Panfilov); Ton District, Kadzhi-Say Village, Sogyuty hole, 23.09.1968, 1 ♂ (Rasnitzyn) (YVC). TJ: Anzob Pass, 39°4'43"N 68°52'3"E, 3300 m a. s. l., 22-25.06., 6. & 15.07.1956, 5 ♂ (Grunin); Zeravshan Ridge, Padrud Village, 1600 m a. s. l., 27.09.1968, 5 ♂ (Sychevskaya) (ZIN); Gorno-Badakhshan Autonomous Province: Khalay-Khumb, at flowers, 6.07.1958, 1 ♂ (Luzhkova) (YVC). TM: Kopet Dag, Kojne-Kassur, 25.06.1923, 1 ♂ (Smirnov) (ZMUM).

6.4.25. *Heteronychia* (s. str.) *hystrix* (Pandellé, 1896), **n. comb.**

Sarcophaga hystrix Pandellé, 1896: 180,

Type locality: FR: Hautes-Pyrénées, Tarbes. Lectotype: ♀ (designated by Pape, 2004: 35); deposited in MNHN.

Sarcophaga hystrix: Pape, 1996: 329; Séguy, 1941: 111; Verves, 1986: 157;

Sarcophaga (*Heteronychia*) *hystrix*: Pape, 2004: 35.

Distribution: Europe: FR.

6.4.26. *Heteronychia* (s. str.) *infantilis* (Böttcher, 1913), **n. comb.**

Sarcophaga infantilis Böttcher, 1913b: 181.

Type locality: IT. Holotype: ♂; deposited in MZUF.

Sarcophaga (*Discachaeta*) *infantilis*: Whitmore et al., 2009: 32.

Sarcophaga (*Heteronychia*) *infantilis*: Koçak, 2014: 349; Koçak & Kemal, 2013: 138; Richet et al., 2011: 29, 94, 102, 132.

Pierretia (*Heteronychia*) *ostensackeni* Rohdendorf, 1937: 309, 353, as “*osten-sackeni*”. Type locality: DE: Heidelberg. Holotype: ♂; deposited in ZIN.

Pierretia (*Heteronychia*) *bezziana*: Rohdendorf, 1937: 347, 349; misidentification: not *Sarcophaga bezziana* Böttcher, 1913.

Heteronychia bezziana: Pape, 1987: 135; Rognes, 1986: 12.

Heteronychia (s. str.) *bezziana*: Povolný & Verves, 1997: 166; Verves, 1986: 151.

Sarcophaga (*Heteronychia*) *bezziana*: Coupland & Baker, 2004: 113, 124; Draber-Moňko, 2007: 232; Koçak, 2014: 349; Koçak & Kemal 2012: 617; Menzel & Ziegler, 2002: 390; Pape, 1988: 17; 1996: 323; Pape & Merz, 1998: 400; Ziegler & Lange, 2001: 144.

Sarcophaga (*Discachaeta*) *bezziana*: Richet et al., 2011: 87.

Distribution: Europe: AT, BG, CH, CZ, DE, FR (continental), GR* (continental), IT (continental), NO, PL, RS, SE; Asia: Mid East (TR).

The larvae occur as internal parasitoids of the terrestrial gastropods from genera *Chondrina* and *Clausilia* (Povolný & Verves, 1990).

Material examined: GR: Olympia 1 ♂ (Engel) (SMNS). SK: Ruské, 19.06.1962, 1 ♂; Súlov-Hradná, 18.05.1971, 1 ♂ (Čepelák) (YVC).

6.4.27. *Heteronychia* (s. str.) *infixa* (Böttcher, 1913)

Sarcophaga infixa Böttcher, 1913a: 124.

Type locality: HU: Gyón. Holotype: ♂; deposited in FNS.

Sarcophaga infixa: Séguy, 1941: 113.

Sarcophaga (*Heteronychia*) *infixa*: Pape, 1996: 330; Richet et al., 2011: 88, 91; Whitmore et al., 2009: 33.

Pierretia (*Pandelleola*) *infixa*: Rohdendorf, 1937: 329.

Heteronychia infixa: Lehrer, 2009d: 9; 2013a: 11; Mihályi, 1979: 142; Peris et al., 1998: 169.

Heteronychia (*Pandelleola*) *infixa*: Verves, 1986: 157.

Heteronychia (s. str.) *infixa*: Povolný & Verves, 1997: 174.

Heteronychia budapestana Lehrer, 2011: 29, **n. syn.** Type locality: not given.

Distribution: Europe: AT, CZ (Moravia), DE, ES, HU.

Description of ♂ *Heteronychia budapestana* is based at drawings of ♂ genitalia of *H. infixa* from Mihályi (1979: 141, fig. 84B). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: HU: Bács-Kiskun County: Ágasegyháza homokbuckás, on faeces, 9.07.1959, 1 ♂ (Mihályi) (YVC).

6.4.28. *Heteronychia* (s. str.) *javita* Peris, González-Mora & Mingo, 1998.

Heteronychia javita Peris, González-Mora & Mingo, 1998: 171.

Type locality: ES: Alicante, Jávea. Holotype: ♂; deposited in MMS.

Sarcophaga (*Heteronychia*) *javita*: Pape et al., 2002: 219; Richet et al., 2011: 93.

Sarcophaga javita:; Pérez-Moreno et al., 2006: 169; Romera et al. 2003: 49.

Distribution: Europe: ES (continental & Balearic Is.).

6.4.29. *Heteronychia* (s. str.) *kataphygionis* Povolný, 1999

Heteronychia kataphygionis Povolný, 1999: 8.

Type locality: GR: Olymp Mt., Kataphygion. Holotype: ♂; deposited in MMBC.

Heteronychia kataphygionis: Povolný & Znojil, 1999: 195.

Sarcophaga (*Heteronychia*) *kataphygionis*: Richet et al., 2011: 29, 89, 100, 133; Whitmore, 2011: 36.

Shoachaeta kataphygionis: Lehrer, 2012b: 11.

Shoachaeta olimpiana Lehrer, 2012b: 11, **n. syn.** Type locality: not given.

Distribution: Europe: FR (continental), GR (continental), IT (continental), PL.

Description of ♂ *Heteronychia olimpiana* is based at drawings of ♂ genitalia of *H. kataphygionis* from Whitmore (2011: 31, fig. 59). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: GR: Kataphygion, 26.08.1993, 1 ♂, Paratype (Povolný) (YVC).

6.4.30. *Heteronychia* (s. str.) *kertezsi* (Villeneuve, 1912)

Sarcophaga kertezsi Villeneuve, 1912a: 20.

Type locality: GR: Poros I. Lectotype: ♂ (designated by Whitmore, 2011: 37); deposited in IRSNB.

Sarcophaga kertezsi: Böttcher, 1913a: 363; Ségué, 1941: 114.

Sarcophaga (*Heteronychia*) *kertezsi*: Pape, 1996: 330; Richet et al., 2011: 93; Whitmore, 2011: 37.

Bellieria kertezsi: Enderlein, 1928: 37.

Helicophagella kertezsi: Enderlein, 1928: 38.

Pierretia (*Pandelleola*) *kertezsi*: Rohdendorf, 1937: 329.

Heteronychia (*Pandelleola*) *kertezsi*: Verves, 1986: 154.

Heteronychia kertezsi: Lehrer, 1912b: 14.

Salemea sororia Povolný, 2004: 8. Type locality: IT: Sicily: Pizzo Onofrio-Casina (Trabia), near Palermo.

Holotype: ♂; deposited in MMBC.

Heteronychia dayani Lehrer, 1996b: 267. Type locality: IL: Mt. Hermon. Holotype: ♂; deposited in ZMAM.

Spatulapica dayani: Lehrer, 1912b: 15.

Heteronychia stromboliana Lehrer, 2013b: 4, **n. syn.** Type locality: not given.

Sarcophaga (*Heteronychia*) *kertezsi*: Koçak, 2014: 350 (incorrect subsequent spelling of *kertezsi*).

Distribution: Europe: GR (continental & Corfu, Crete, Poros), IT (Sicily). Asia: Mid East (IL, Lebanon, TR).

Description of ♂ *Heteronychia stromboliana* is based at drawings of ♂ genitalia of *H. kertezsi* from Whitmore (2010: 82, pl. 40). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

6.4.31. *Heteronychia* (s. str.) *kovalae* Verves, 1979

Heteronychia (*Spatulapica*) *kovalae* Verves, 1979: 865, 868.

Type locality: KZ: Chimkent Region: Kyzyl Kum, Timur Station. Holotype: ♂; deposited in ZIN.

Heteronychia (*Spatulapica*) *kovalae*: Verves, 1986: 154.

Heteronychia kovalae: Verves, 1990: 584, 594.

Sarcophaga (*Heteronychia*) *kovalae*: Pape, 1996: 330.

Distribution: Asia: KZ.

Holotype of *H. kovalae* has 4 pairs of postsutural dorsocentral bristles of equal length.

6.4.32. *Heteronychia* (s. str.) *kozlovi* (Rohdendorf, 1937)

Pierretia (*Eupierretia*) *kozlovi* Rohdendorf, 1937: 382.

Type locality: CN: Tszosto [= Neimenggu]: Ala Shan [= Helan Shan] Ridge, Gobi. Holotype: ♂; deposited in ZIN.

Heteronychia (*Eupierretia*) *kozlovi*: Fan, 1992: 655; Han et al., 1985: 76; Verves, 1986: 149.

Heteronychia kozlovi: Fan & Pape, 1996: 249; Verves, 1990: 596.

Sarcophaga (*Heteronychia*) *kozlovi*: Pape, 1996: 330; Whitmore, 2011: 37.

Heteronychia (*Eupierretia*) *helanshanensis* Han et al., 1985: 76, Type locality: CN: Ningxia: Helanshan.

Holotype: ♂; deposited in IMEC.

Heteronychia (*Eupierretia*) *helanshanensis*: Fan, 1992: 655.

Heteronychia helanshanensis: Fan & Pape, 1996: 249.

Sarcophaga (Heteronychia) helanshanensis: Pape, 1996: 329.

Distribution: Asia: CN (Neimenggu, Ningxia).

Geographical label of this male was published by Rohdendorf (1937: 385) as one of 3 ♂ based for description, but any derivatives about its taxonomic status are absent; thus we designate present specimen as paralectotype.

Material examined: CN: [Neimenggu]: Ala Shan [= Helan Shan] Ridge, Suburgan-Gol, 30.04.1898, 1 ♂, Paralectotype of *H. kozlovi* (present designation) (IEEU).

6.4.33. *Heteronychia (s. str.) lacrymans* (Villeneuve, 1912)

Sarcophaga lacrymans Villeneuve, 1912c: 49.

Type locality: SY: Oase Damas. Lectotype: ♂ (designated by Whitmore 2011: 38); deposited in IRSNB.

Sarcophaga lacrymans: Böttcher, 1913a: 251; Séguy, 1941: 160.

Sarcophaga (Heteronychia) lacrymans: Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 330; Pekbey & Hayat, 2011: 10; Whitmore, 2011: 38.

Pierretia (Eupierretia) lacrymans: Rohdendorf, 1937: 352.

Heteronychia (Eupierretia) lacrymans: Verves, 1986: 154.

Heteronychia (s. str.) lacrymans: Verves & Khrokalo, 2014a: 24.

Sarcophaga thalhammeri Böttcher, 1913: 253. Type locality: HU: Pécz, früher Kalocsa. Lectotype: ♂ (designated by Whitmore, 2011: 38); deposited in FNS.

Sarcophaga thalhammeri: Séguy, 1941: 97.

Sarcophaga (Heteronychia) thalhammeri: Pape, 1996: 335; Richet et al., 2011: 92.

Pierretia (Heteronychia) thalhammeri: Rohdendorf, 1937: 361.

Sarcotachinella thalhammeri: Baranov, 1942: 564.

Heteronychia thalhammeri: Mihályi, 1979: 148.

Heteronychia (s. str.) thalhammeri: Povolný & Verves, 1990: 299; 1997: 181; Verves, 1986: 154.

Sarcophaga zhelochovtzevi Rohdendorf, 1925: 58. Type locality: RU: Krasnodar Region: Troitzkaya near Taman. Holotype: ♂; deposited in ZMUM.

Sarcophaga (Heteronychia) zhelochovtzevi: Kara & Pape, 2002: 294; Pape, 1996: 336.

Pierretia (Heteronychia) zhelochovtzevi: Rohdendorf, 1937: 360.

Heteronychia (Eupierretia) zhelochovtzevi: Povolný & Slamečková, 1970: 331.

Heteronychia zhelochovtzevi: Mihályi, 1979: 148; Rohdendorf, 1970: 668; Verves, 1978b: 42.

Heteronychia (s. str.) zhelochovtzevi: Verves, 1986: 154; 1998: 52.

Heteronychia (Eupierretia) cepelaki Povolný & Slamečková, 1970: 331. Type locality: SK: Čierny Váh. Holotype: ♂; deposited in MMBC.

Heteronychia (s. str.) cepelaki: Povolný, 1985: 171; 1997: 99; Povolný & Verves, 1997: 168.

Sarcophaga (Heteronychia) cepelaki: Pape, 1996: 324.

Heteronychia (s. str.) markevitshi Verves, 1975: 665. Type locality: UA: Kyiv Region: Ustinovka. Holotype: ♂; deposited in SIZK.

Heteronychia (s. str.) markevitshi: Verves, 1998: 53.

Heteronychia histriops Lehrer, 2008b: 15. Type locality: RO: Constanta District: Cetatea Istria. Holotype: ♂; deposited in MGAB.

Heteronychia suriyyaha Lehrer, 2013a: 6, **n. syn.** Type locality: not given.

Distribution: Europe: AT, BG, CZ, HU, RO, SK, UA; Asia: Mid East (IQ, IL, SY, TR), North Caucasus: RU (Krasnodar Region), Transcaucasia (GE).

Description of ♂ *Heteronychia suriyyana* is based at drawings of ♂ genitalia of *H. lacrymans* from Whitmore [2010 (as "2011" after Lehrer, 2013a): 90, pl. 42]. The differences between various original drawings of ♂ genitalia of *H. lacrymans* are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: HU: Bicsérdén, 25.07.1959, 1 ♂ (Mihályi) (HNHM). IQ: Bakkež, 29.09.1956, 1 ♂ (ZSM).

6.4.34. *Heteronychia (s. str.) lejlekensis* (Whitmore, 2011), **n. comb.**

Sarcophaga (Heteronychia) lejlekensis Whitmore, 2011: 8.

Type locality: KG: 30 km NE of Lejlek [=Laylyak]. Holotype: ♂; deposited in ZIN.

Distribution: Asia: KZ*, Mid Asia (KG, UZ*).

Type locality of this species was published by Whitmore (2011) after name “Lejlek” as a result of incorrect translation of Russian label. Really this location name is “Laylyak” - canyon of Turkestan Ridge at altitude about 2000 m a. s. l.

Material examined: KG: Chuy Province: 20 km N of Laylyak, 25.08. & 2.09.1969, 2 ♂, 2 ♀ (Pritykina); Jalal-Abad Province: Kara-Tyube Village, 700 m a. s. l., 23.07.1962, 1 ♂ (Ponomarenko); Osh Province: 30 km S-W of Samarkandek Village, bank of Madygen stream, 1300 m a. s. l., 15.07.1971, 6 ♂; Sary-Tash Village, Say Sagul locality, 1200 m a. s. l., 2.-7.09.1971, 3 ♂, 4 ♀ (Pritykina). KZ: South Region: Aksu-Jabagly State Nature Reserve, 18.07.1927 1 ♂ (Kashkarov). UZ: Samarkand Region: Aman-Kutan Village, 21.06, 20.08. & 21.09.1938, 13 ♂, 2 ♀ (Fursov) (YVC+ IEEU).

6.4.35. *Heteronychia* (s. str.) *macromembrana* Ye, 1980

Heteronychia macromembrana Ye, 1980: 286.

Type locality: CN: Sichuan: Nanping. Holotype: ♂; deposited in IMEC.

Heteronychia (*Eupierretia*) *macromembrana*: Verves, 1986: 149.

Heteronychia macromembrana: Fan, 1992: 654; Fan & Pape, 1996: 249.

Sarcophaga (*Heteronychia*) *macromembrana*: Pape, 1996: 331.

Distribution: Asia: CN (Sichuan).

6.4.36. *Heteronychia* (s. str.) *maritima* Povolný, 1995

Heteronychia (*Spatulalica*) *maritima* Povolný, 1995: 186.

Type locality: GR: Thessalia: Skotina-Vádi near Leptokaria. Holotype: ♂; deposited in MMBC.

Heteronychia maritima: Lehrer & Oprisan, 2013: 23; Povolný, 1999: 10; Povolný & Znojil, 1999: 195.

Sarcophaga (*Heteronychia*) *croca* Richet, Blackith & Pape, 2011: 89, unnecessary new name for *H. maritima*.

Sarcophaga (*Heteronychia*) *croca*: Whitmore, 2011: 26.

Heteronychia (s. str.) *benaci*: Povolný, 1996: 105; misidentification, not *Sarcophaga benaci* Böttcher, 1913.

Distribution: Europe: HR, GR (continental).

Material examined: GR: Thessalia: Skotina, 30.10.1990, 1 ♂ (Povolný) (YVC).

6.4.37. *Heteronychia* (s. str.) *mazurmovitshi* Verves, 1979

Heteronychia (*Spatulapica*) *mazurmovitshi*: Verves, 1979: 869.

Type locality: UA: Cherkasy Region: Kaniv State Reservation, 6 km S of Kaniv. Holotype: ♂; deposited in ZIN.

Heteronychia (*Spatulapica*) *mazurmovitshi*: Verves, 1986: 152.

Heteronychia (s. str.) *mazurmovitshi*: Verves, 1998: 53; Verves & Khrokalo, 2014a: 24.

Sarcophaga (*Heteronychia*) *mazurmovitshi*: Whitmore, 2011: 52.

Distribution: Europe: UA.

6.4.38. *Heteronychia* (s. str.) *metopina* (Villeneuve, 1908).

Sarcophaga metopina Villeneuve, 1908: 124.

Type locality: ES: Canary Is.: La Palma. Lectotype: ♂ (designated by Whitmore, 2011: 40); deposited in MNHUB.

Sarcophaga metopina: Böttcher, 1913a: 249; Séguy, 1941: 119.

Sarcophaga (*Heteronychia*) *metopina*: Pape, 1996: 331; Pape et al., 1992: 219; Whitmore, 2011: 40.

Dasypygia metopina: Enderlein, 1928: 40.

Bercaea metopina: Enderlein, 1928: 51.

Pierretia (*Heteronychia*) *metopina*: Rohdendorf, 1937: 354.

Heteronychia (s. str.) *metopina*: Verves, 1986: 149.

Heteronychia metopina: Lehrer, 2003: 213; Povolný, 2003: 21.

Distribution: North Africa: ES (Canary Is.).

Material examined: ES: Canary Is.: El Hierro I.: Las Playas, 7.11.1982, 1 ♂ (Franz) (NMW).

6.4.39. *Heteronychia* (s. str.) *nanula* Povolný, 1999.

Heteronychia rohdendorfi nanula Povolný, 1999: 11.

Type locality: IT: Sicily: Pizzo Cane-Savochetto. Holotype: ♂; deposited in MMBC.

Sarcophaga (*Heteronychia*) *nanula*: Whitmore, 2011: 43.

Distribution: Europe: FR (continental), IT (Sicily), MK.

6.4.40. *Heteronychia* (s. str.) *nipponensis* Shinonaga & Matsudaira, 1970

Heteronychia nipponensis Shinonaga & Matsudaira, 1970: 87.

Type locality: JP: Honshu: Fukushima Prefecture, Goshiki-numa. Holotype: ♂; deposited in TMDU.

Heteronychia nipponensis: Kano & Kurahashi, 1999: 73; Verves & Khrokalo, 2006: 147.

Heteronychia (*Eupierretia*) *nipponensis*: Verves, 1986: 149.

Sarcophaga (*Heteronychia*) *nipponensis*: Pape, 1996: 331.

Distribution: Asia: JP (Honshu, Kyushu).

6.4.41. *Heteronychia* (s. str.) *obvia* Povolný, 2004.

Heteronychia obvia Povolný, 2004: 11.

Type locality: IT: Sicily: Pizzo Onofrio-Casina (Tribia), near Palermo. Holotype: ♂; deposited in MMBC.

Sarcophaga (*Heteronychia*) *obvia*: Richet et al., 2011: 92.

Distribution: Europe: IT (Sicily).

6.4.42. *Heteronychia* (s. str.) *pandellei* (Rohdendorf, 1937)

Pierretia (*Eupierretia*) *pandellei* Rohdendorf, 1937: 376; new name for *Sarcophaga consanguinea* Pandellé, 1896: 187.

Type locality: FR: Var, Hyères. Lectotype: ♂ (designated by Pape 2004: 46); deposited in MNHN.

Sarcophaga pandellei: Pape, 2004: 46; Séguy, 1941: 128.

Sarcophaga (*Heteronychia*) *pandellei*: Carles-Tolrà & Rosado, 2009: 343; Pape, 1996: 331; Pape et al. 2002: 219; Richet et al., 2011, pp. 29, 91, 101, 133; Whitmore, 2009: 572, 581.

Heteronychia (*Eupierretia*) *pandellei*: Povolný & Verves, 1986: 119; Rohdendorf, 1975: 199; Verves, 1986: 149.

Heteronychia pandellei: Peris et al., 1998: 171; Povolný, 1997a: 52; 2003: 22.

Sarcophaga consanguinea Pandellé, 1896: 187. Type locality: FR: Var: Cavalière. Holotype: ♂; deposited in MNHN; junior primary homonym of *Sarcophaga consanguinea* Rondani, 1860.

Sarcophaga consanguinea: Böttcher, 1913a: 358, 372.

Ctenodasyptigia consanguinea: Baranov, 1942: 595; Enderlein, 1928: 40.

Heteronychia consanguinea: Lehrer, 2003: 211.

Heteronychia vonrohdendorfi Lehrer, 2013b: 4, 12, **n. syn.** Type locality: not given.

Distribution: Europe: AD, ES, FR (continental & Corsica), HR, IT (continental, Sardinia & Sicily), PL, PT; North Africa: DZ, TN.

This species reared in the laboratory on freshly killed snails (Richet et al., 2011).

Description of ♂ *Heteronychia vonrohdendorfi* is based at drawings of ♂ genitalia of *S. pandellei* from Whitmore (2011: 96, pl. 54). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: ES: Costa Brava, Estartit, 26.08.-9.09.1962, 1 ♂ (Röseler) (YVC). IT: Sicily: Agrigento, 27.05.1956, 1 ♂ (Lindner) (SMNS).

6.4.43. *Heteronychia* (s. str.) *pauciseta* (Pandellé, 1896)

Sarcophaga pauciseta Pandellé, 1896: 182.

Type locality: "Prusse orientale": Königsberg [= RU: Kaliningrad]. Lectotype: ♂ (designated by Pape, 2004: 38); deposited in MNHN.

Sarcophaga pauciseta: Böttcher, 1913a: 359; Pape, 2004: 38; Séguy, 1941: 129.

Sarcophaga (*Heteronychia*) *pauciseta*: Draber-Moňko, 2007: 232; Pape, 1996: 332; Richet et al., 2011: 92.

Pierretia (Eupierretia) pauciseta: Rohdendorf, 1937: 378.

Heteronychia pauciseta: Lehrer, 2013d: 26; Mihályi, 1979: 150; Povolný, 2002a: 307; Rohdendorf, 1970: 669; Verves, 1990: 596.

Heteronychia (Eupierretia) pauciseta: Povolný & Verves, 1990: 295; Verves, 1986: 149; Verves & Khrokalo, 2006: 147.

Heteronychia (s. str.) pauciseta: Povolný & Verves, 1997: 175; Verves, 1998: 53; Verves & Khrokalo, 2014a: 24.

Sarcophaga rossica Rohdendorf, 1925: 54. Type locality: RU: Moscow Region: Bronnitsy District, Ilyinskaya. Holotype: ♂; deposited in ZMUM.

Heteronychia haesita Lehrer, 2013d: 26, **n. syn.** Type locality: not given.

Distribution: Europe: AT*, BG, CZ, ES, DE, PL, RU (Bashkortostan*, Kaliningrad, Leningrad, Moscow & Perm* Regions), SK, CH, UA; Asia: Siberia: RU (Altai, Buryatia* & Irkutsk Regions).

Description of ♂ *Heteronychia haesita* is based at drawings of ♂ genitalia of *S. pauciseta* from Whitmore (2010: 228, pl. 55). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they do not be used as reason for designation of a new species.

Material examined: AT: Mögling, Umgb. A. i., X 20501, 1 ♂; Pernitz, 1 ♂ (Franz) (NMW). RU: Altai Republic: Bicheka, 12.07.1960, 1 ♂ (Rasnytyzn); Bashkortostan: Ufa, 31.05.1948, 1 ♂ (Nasyrova) (YVC); Buryatia: Khamar-Daban Ridge, Berchil, 7-9.08.1962, 2 ♂ (Kolomyietz) (SZM); Perm Region: Kungur, 12.07.1957, 3 ♂ (Borisova) (YVC).

6.4.44. *Heteronychia (s. str.) plotnikovi* (Rohdendorf, 1925)

Sarcophaga plotnikovi Rohdendorf, 1925: 53.

Type locality: UZ: Tashkent Region: Ak-Tash. Holotype: ♂; deposited in ZMUM.

Sarcophaga (Heteronychia) plotnikovi: Pape, 1996: 332; Whitmore, 2011: 44; Whitmore et al., 2009: 37.

Pierretia (Heteronychia) plotnikovi: Rohdendorf, 1937: 377.

Heteronychia (Eupierretia) plotnikovi: Fan, 1992: 655; Verves, 1984: 557; 1986: 149.

Heteronychia plotnikovi: Verves, 1990: 585, 596.

Heteronychia (Eupierretia) brachystylata Chao & Zhang, 1988: 78, 80. Type-locality: CN: Xinjiang, Baicheng, 41°50'N, 81°50'E. Holotype: ♂; deposited in IZCA.

Heteronychia brachystylata: Fan & Pape, 1996: 249.

Sarcophaga (Heteronychia) brachystylata: Pape, 1996: 324.

Heteronychia turbophalla Lehrer, 2013b: 4, **n. syn.** Type locality: not given.

Distribution: Asia: CN (Xinjiang), KZ, Mid Asia (KG, TJ, UZ).

Description of ♂ *Heteronychia turbophalla* is based at photo of ♂ genitalia of *S. plotnikovi* from Whitmore (2010: 231, pl. 58). The differences between various original drawings and photoes of ♂ genitalia of last species are very petty and reflected the individual styles of authors and intraspecific variability; they do not be used as reason for designation of a new species.

Material examined: KZ: Almaty Province: Jarkent Region, Usek Dacha, 1.08.1925, 1 ♀ (Rohdendorf); East Province: Zaisan Basin, bank of Karasu River, 20.06.1965, 4 ♂ (Ponomarenko); Saur Mountain Ridge, bank of Karaungir River, 12.07.1965 & 26.06.1967, 2 ♂, 2 ♀ (Pritykina); Saykhan Hole, 25.06.-9.07.1965, 6 ♀ (Popov) (YVC+IEEU). KG: Batken Province: Kichik-Alai Ridge, Isfairam-Sai Basin, 45 km S of Kyzyl-Kiya, N 39°08.7' E 72°06.4', 2000-2200 m a. s. l., 2. & 10.07.1999, 2 ♂ (Korneev & Kameneva) (SIZK); Chuy Province: 30 km N-E of Laylyak, 1. & 16.07.1962, 3 ♂, 20 km N of Laylyak, 6.06.1964, 9. & 24.09.1968 & 14.08.-3.09.1969, 7 ♂, 11 ♀ (Ponomarenko) (YVC+IEEU); Trans-Ili Alatau: Bogauta Mt., Burgam-sai, 11.06.1962, 1 ♂ (Kulikova); Kara-Kosak, 22.06.1955, 1 ♂ (Baidenov); Dzalalabat Province: Chatkal Ridge, Jangy-Jol, lower Karasu River, left high bank, 24.09.1950, 1 ♂; Fergana Ridge, 10 km from Karavan to Dzalalabat, 2.10.1950, 1 ♂ (Grunin) (ZIN); Osh Province: 30 km S-W of Samarkandek Village, bank of Madygen stream, 1300 m a. s. l., 15.07.1971, 6 ♂, 7 ♀; Sary-Tash Village, Say Sagul locality, 1200 m a. s. l., 12.08.-9.09.1971, 2 ♂, 3 ♀ (Pritykina) (YVC+IEEU). TJ: Gissar Range, Kondara Canyon, 12.05.1957, feed on flowers of *Prangos pabularia*, 1 ♂ (Sychevskaya); Zimtut nr Panjakent City, garden, 14.09.1962, 1 ♀ (Gadzhey). UZ: Fergana Province: Shakhimardan, 2000 m a. s. l., 10.10.1955, 2 ♂ (Sychevskaya) (ZIN); Jalal-Abad Province: Chatkal Range, 31.08.1980, 2

♂ (Elberg) (EIZB); Ramid, bank of Kofirnihan River, 25.07.1939, 1 ♂ (Romanov) (ZIN). Qashqadaryo Province: Khitay, 15.08.1954, 1 ♂; Miraki, 14.08.1954, 1 ♂ (Sychevskaya) (YVC).

6.4.45. *Heteronychia* (s. str.) *pontica* (Rohdendorf, 1937)

Pierretia (*Heteronychia*) *pontica* Rohdendorf, 1937: 358.

Type locality: RU: Krasnodar Region: Beta. Holotype: ♂; deposited in ZIN.

Heteronychia pontica: Verves, 1978b: 42.

Heteronychia (s. str.) *pontica*: Povolný & Verves, 1990: 298; Verves, 1986: 152.

Sarcophaga (*Heteronychia*) *pontica*: Pape, 1996: 332; Richet et al., 2011: 92.

Heteronychia simulopontica Lehrer, 2013b: 4, 7, **n. syn.** Type locality: not given.

Distribution: Europe: BG. Asia: North Caucasus: RU (Chechnya, Dagestan, Karachay-Cherkessia, Krasnodar & Stavropol Regions), Transcaucasia.

Description of ♂ *Heteronychia simulopontica* is based at photo of ♂ genitalia of *S. pontica* from Whitmore (2010: 102, pl. 59). The differences between various original drawings and photoes of ♂ genitalia of last species are very petty and reflected the individual styles of authors and intraspecific variability; they do not be used as reason for designation of a new species.

Material examined: AZ: Talysh: Lerik, 13.06.1970, 3 ♂ (Richter) (ZIN). GE: Akhalkalaki District: Tzkhethi, forest, 1.07.1965, 3 ♂ (Gudjabidze) (GZI).

6.4.46. *Heteronychia* (s. str.) *porrecta* (Böttcher, 1913)

Sarcophaga porrecta Böttcher, 1913a: 361.

Type locality: IT: Trentino-Alto Adige: Mori. Lectotype: ♂ (designated by Whitmore, 2011: 45); deposited in FNS.

Sarcophaga porrecta: Séguy, 1941: 132.

Sarcophaga (*Heteronychia*) *porrecta*: Pape, 1996: 332; Richet et al., 2011: 93; Whitmore, 2010: 105, 233; 2011: 45.

Pierretia (*Eupierretia*) *porrecta*: Baranov, 1941: 375; Rohdendorf, 1937: 381.

Bellieria porrecta: Baranov, 1942: 586.

Heteronychia (*Eupierretia*) *porrecta*: Povolný & Slamečková, 1979: 115; Povolný & Verves, 1990: 295; Verves, 1986: 152.

Heteronychia (s. str.) *porrecta*: Povolný & Verves, 1997: 176.

Heteronychia (*Eupierretia*) *bulgariensis* Lehrer, 1977a: 29, Type locality: BG: Kosténeec. Holotype: ♂; deposited in SOFM.

Heteronychia verorecta Lehrer, 2013b: 4, **n. syn.**

Distribution: Europe: BG, CZ (Moravia), GR (continental), HR, IT (continental), SK.

Description of ♂ *Heteronychia verorecta* is based at photos of ♂ genitalia of *S. plotnikovi* from Whitmore (2010: 231, pl. 58). The differences between various original drawings and photoes of ♂ genitalia of last species are very petty and reflected the individual styles of painters and intraspecific variability; they do not be used as reason for designation of a new species.

Material examined: HR: Zagreb, 20.V.1931, 4 ♂, 1 ♀ (Engel) (SMNS).

6.4.47. *Heteronychia* (s. str.) *proxima* (Rondani, 1860) (figs 23-25)

Sarcophaga proxima Rondani, 1860: 392.

Type locality: IT: "In Italia boreali perrara (Messino)". Holotype: ♂; deposited in MZUF.

Sarcophaga proxima: Böttcher, 1913a: 351; Pape, 1988: 13; Séguy, 1941: 135.

Sarcophaga (*Heteronychia*) *proxima*: Coupland & Baker, 2004: 114; Draber-Moňko, 2007: 232; Pape, 1996: 333; Pape et al., 2002: 219; Pohjoismäki & Kahanpää, 2014: 389; Richet et al., 2011: 29, 91, 100, 134; Whitmore, 2011: 44.

Bellieria proxima: Baranov, 1942: 587; Enderlein, 1928: 37.

Pierretia (*Heteronychia*) *proxima*: Rohdendorf, 1937: 364.

Pierretia proxima: Povolný & Groschafft, 1959: 131.

Heteronychia (*Spatulapica*) *proxima*: Fan, 1964: 315, 319.

Heteronychia (*Eupierretia*) *proxima*: Rohdendorf, 1965: 693; Povolný & Verves, 1986: 115; 1990: 296; Verves, 1986: 152;

Heteronychia proxima: Fan & Pape, 1996: 249; Lehrer, 2012b: 16; Mihályi, 1979: 151; Pape, 1987: 141, 144; Rohdendorf, 1970: 669; Rudzinski & Flügel, 2007: 64; Verves, 1990: 585, 597.

Heteronychia (s. str.) *proxima*: Povolný, 1997: 99; Povolný & Verves, 1997: 177; Verves, 1998: 53; Verves & Khrokalo, 2014a: 24; 2014b: 22.

Heteronychia (*Eupierretia*) *lednicensis* Povolný 1986, In: Povolný & Verves, 1986: 115. Type locality: CZ: Moravia: Nejdek nr Lednice. Holotype: ♂; deposited in MMBC.

Sarcophaga (*Heteronychia*) *lednicensis*: Pape, 1996: 330.

Heteronychia (s. str.) *lednicensis*: Povolný & Verves, 1997: 175.

Heteronychia lednicensis: Lehrer, 2012b: 16.

Distribution: Europe: AL, AD, AT, BG, BU, CH, CZ, DE, ES, FI, FR (continental), HR, HU, IT (continental & Sicily), LV, MD, PL, RO, RS, RU, SE, SK, UA. Asia: North Caucasus: RU (Kabardino-Balkaria); West Siberia: RU (Altai & Novosibirsk Regions); Tibet. North Africa: LY.

Larvae are internal parasitoids of terrestrial snail *Eumphalia strigella* (Coupland & Baker, 2004; Povolný & Groschafft, 1959), and caterpillar of geometrid moth *Agriopsis aurantaria* (Povolný & Verves 1997).

Material examined: IT: S Tirol 1 ♂ (Fischer) (SMNS). RU: Perm Region, Kungur, 5.08.1955, 9, 27 & 28.VI., 12 & 17.07.1957, 28.08.1958, 14 ♂, 1 ♀ (Zinovyeva) (ZIN). SK: Súľov-Hradná, 18.08.1971, 1 ♂ (Buček) (YVC).

6.4.48. *Heteronychia* (s. str.) *pseudobenaci* (Baranov, 1942)

Mehria pseudobenaci Baranov, 1942: 618, 658.

Type locality: RS: Golubac. Lectotype: ♂ (designated by Whitmore, 2011: 46); deposited in USNM.

Mehria pseudobenaci: Sabrosky & Crosskey, 1970: 430.

Heteronychia pseudobenaci: Lehrer, 2012b: 8; Verves, 1986: 157.

Sarcophaga (*Heteronychia*) *pseudobenaci*: Pape, 1996: 336; Whitmore, 2011: 46.

Heteronychia (s. str.) *drenskiana* Lehrer, 1977a: 34. Type locality: BG: Vitoša Pl. Holotype: ♂; deposited in SOFM.

Heteronychia drenskiana: Lehrer, 2012b: 8; Lehrer & Oprisan, 2012: 28.

Distribution: Europe: BG, GR (continental), RO, RS.

6.4.49. *Heteronychia* (s. str.) *recta* (Rohdendorf, 1937)

Pierretia (*Eupierretia*) *recta* Rohdendorf, 1937: 379.

Type locality: GE: Abkhazia: Sukhum. Holotype: ♂; deposited in ZIN.

Heteronychia (s. str.) *recta*: Verves, 1978b: 42.

Heteronychia (*Eupierretia*) *recta*: Verves, 1986: 152.

Sarcophaga (*Heteronychia*) *recta*: Pape, 1996: 333; Pekbey & Hayat, 2011: 11.

Distribution: Asia: Mid East (TR), North Caucasus: RU (Karachay-Cherkessia & Krasnodar Regions), Transcaucasia.

Material examined: AM: environs of Ankavan, 14.07.1965, 12 ♂, 3 ♀ (Richter) (ZIN); Kotigek, 10.06.1974, 1 ♂. AZ: Lachin District: Gorchu, 1800 v a. s. l., 22.06.1974, 1 ♂, 1 ♀, (Ponomarenko). GE: Abkhazia: Pitzunda, 2 km E, beech (*Fagus orientalis*) forest, 200-300 m a. s. l., 1-8.08.1970, 3 ♂ (Verves). RU: Krasnodar Region: Khosta, 15.05.1955, 1 ♂ (Rohdendorf) (YVC & IEEU).

6.4.50. *Heteronychia* (s. str.) *rohdendorfi* (Povolný & Slamečková, 1959)

Pierretia rohdendorfi Povolný & Slamečková, 1959: 427.

Type locality: SK: Velký Inovec. Holotype: ♂; deposited in MMBC.

Heteronychia (*Spatulapica*) *rohdendorfi*: Povolný, 1985: 169; Povolný & Slamečková, 1967: 316; Verves, 1979: 865, 868; 1986: 157.

Heteronychia rohdendorfi: Mihályi, 1979: 145; Povolný, 1998b: 9; 1999: 10; 2000b: 63.

Heteronychia (s. str.) *rohdendorfi*: Povolný, 1997: 99; Povolný & Verves, 1997: 177; Verves, 1998: 53; Verves & Khrokalo, 2014a: 25.

Spatulapica rohdendorfi: Lehrer, 2006e: 5; 2012a: 5; 2013d: 20.

Spatulapica lederbergi Lehrer, 1995b: 90. Type locality: CZ: Moravia: Pavlovské Mts. Holotype: ♂; deposited in MMBC.

Spatulapica lederbergi: Lehrer, 2012a: 5; 2013d: 20.

Sarcophaga (*Heteronychia*) *lederbergi*: Draber-Moňko, 2007: 232; Pape, 1996: 330; Whitmore, 2011: 39.

*Sarcophaga (Heteronychia) borodorf*⁵ Pape, 1996: 58, 324; unnecessary new name for *Heteronychia rohdendorfi* Povolný & Slamečková, 1959.

Sarcophaga (Heteronychia) borodorf: Richet et al., 2011: 28, 88 99, 127.

Sarcophaga borodorf: Pape & Merz, 1998: 400.

Distribution: Europe: AT, CH, CZ (Moravia), DE, FR (continental), GR (continental), HU, IT (continental & Sicily), PL, RO, SK, UA.

Material examined: CH: Auvernier, 13.08.1961, 1 ♂; Vaud, Aclens, 29.07.1961, 1 ♂ (Beamont) (UNS).

6.4.51. *Heteronychia (s. str.) rohdendorfiana* Mihályi, 1975

Heteronychia (s. str.) rohdendorfiana Mihályi, 1975: 106.

Type locality: HU: Bükk-hg, Elza-lak, Nagyvisnyó. Holotype: ♂ deposited in HNHM.

Heteronychia rohdendorfiana: Lehrer, 2006b: 5; Mihályi, 1979: 146.

Heteronychia (s. str.) rohdendorfiana: Povolný, 1997: 99; Povolný & Verves, 1997: 178; Verves, 1986: 154; 1998: 53; Verves & Khrokalo, 2014a: 25.

Sarcophaga rohdendorfiana: Pape & Merz, 1998: 400.

Sarcophaga (Heteronychia) rohdendorfiana: Blackith et al., 2004: 11.

Pierretia (Heteronychia) nigracauda Povolný & Slamečková 1959: 431 (Junior secondary homonym of *Erichsonia nigracauda* Robineau-Desvoidy, 1863: 494). Type locality: SK: Velký Inovec. Holotype: ♂; deposited in MMBC.

Heteronychia (s. str.) nigracauda: Povolný & Slamečková, 1979: 117; Povolný & Staněk, 1969: 186.

Heteronychia (s. str.) nigracaudata Povolný & Slamečková, 1982. In: Povolný, 1982: 1; new name for *Pierretia nigracauda* Povolný & Slamečková, 1959.

Heteronychia nigracaudata: Rudzinski & Flügel, 2007: 64.

Sarcophaga (Heteronychia) nigracaudata: Coupland & Baker, 2004: 113; Draber-Moňko, 2007: 232; Pape, 1996: 331.

Sarcophaga (Heteronychia) chaetoneura: Blackith et al., 2004: 4 (in part).

Heteronychia nadae Lehrer, 2006b: 6; unnecessary new name for *Sarcophaga chaetoneura* sensu Blackith et al., 2004 (in part); **n. syn.**

Distribution: Europe: AT, BG, CH, CZ, DE, HU, PL, SK, UA.

Description of ♂ *Heteronychia nadae* is based at drawings of ♂ genitalia of *H. chaetoneura* sensu Blackith et al. (2004: 5, figs 5 & 10). The differences between various original drawings of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

The larvae are the parasites of terrestrial snails *Arianta arbustorum*, *Bradybaena fruticum* and *Monachoides incarnata* (Coupland & Baker, 2004; Povolný, 1982).

Material examined: AT: Mögling Umgb. X 2050, 1 ♀ (Franz) (NMW). DE: Baden-Württemberg: Ummendorfer Ried bei Biberach, 13.06.1948, 1 ♂ (Lindner); [Bayern] Allgäu, Österachtai, 1050 m, 17.06.1924, 2 ♂; Dachau, Kultur, 23.06.1912, 1 ♂ (Engel) (SMNS). SK: Prieslop, 9.08.1973, 1 ♂, (Slamečková); Velký Inovec, 20.06.1957, 1 ♂ (Gyglai) (YVC).

6.4.52. *Heteronychia (s. str.) rondaniana* (Rohdendorf, 1937)

Pierretia (Heteronychia) rondaniana Rohdendorf, 1937: 361; new name for *Sarcophaga arvorum* sensu Rondani, 1860: 381.

Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 17); deposited in MZUF.

Pierretia (Heteronychia) rondaniana: Baranov, 1941: 375.

Pierretia rondaniana: Pape, 1988: 17.

Heteronychia (s. str.) rondaniana: Peris et al., 1998: 169, 170; Povolný, 1997: 99; Povolný & Verves, 1990: 298; 1997: 179.

Heteronychia rondaniana: Lehrer, 2006d: 14.

Sarcophaga (Heteronychia) rondaniana: Hayat et al., 2008: 389; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 333; Pape et al., 2002: 219; Richet et al., 2011: 29, 92, 102, 134.

Heteronychia histriops Lehrer, 2008a: 15. Type locality: RO: Cetatea Istria (distr. Constanta). Holotype: ♂; deposited in MGAB.

⁵ The abbreviation “*borodorf*” is disrespect of memory of late Prof. Boris von Rohdendorf (1904-1977), author of modern system of Sarcophagidae; such actions are not recommended by ICZN (Supplementum A: Ethical Codex).

Sarcophaga arvorum: Böttcher, 1913a: 252; Pandellé, 1896: 204; Rondani, 1860: 381, misidentification: not *Sarcophaga arvorum* Meigen, 1826.

Dasypygia arvorum: Enderlein, 1928: 37.

Athyrsia depressifrons: Enderlein, 1928: 37, misidentification: not *Sarcophaga depressifrons* Zetterstedt, 1845.

Sarcophaga depressifrons: Séguy, 1941: 96.

Heteronychia depressifrons: Lehrer, 1967: 1; 2006d: 14; 2009a: 10. Mihályi, 1979: 148.

Heteronychia (s. str.) *depressifrons*: Verves, 1986: 152.

Distribution: Europe: AT, BG, CH, CZ, DE, ES, FR (continental), GR (continental), HR, HU, IT (continental), MK, NL, RO, RS, SK; Asia: Mid East (TR).

Material examined: HU: Alsoessöpuszta bei Örkény, 06.1925, 3 ♂; Tatárszentgyörgy, 06.1925, 3 ♂ (Engel) (SMNS); Bicsérd, 25.07.1959, 1 ♂ (Mihályi); Budaörs, 24.08.1958, 1 ♂ (Szöcz). SK: Kolárovo, 25.08.1958, 1 ♂ (Slamečková) (YVC).

6.4.53. *Heteronychia* (s. str.) *rosellensis* (Whitmore, 2011), **n. comb.**

Sarcophaga (*Heteronychia*) *rosellensis* Whitmore, 2011: 12,

Type locality: IT: Abruzzi, Chieti Prov., Abetina di Rosello, Fonte Volpona. Holotype: ♂; deposited in CNBFVR.

Sarcophaga rosellensis: Lehrer, 2012c: 24; as a synonym of *Sarcophaga vagans* Meigen, 1826: 26.

Distribution: Europe: IT (continental).

6.4.54. *Heteronychia* (s. str.) *schineri* (Bezzi, 1891)

Sarcophaga schineri Bezzi, 1891: 67.

Type locality: IT: Pavia. Holotype: ♂; deposited in MRSNT.

Sarcophaga schineri: Böttcher, 1913a: 356; Pape & Merz, 1998: 400; Séguy, 1941: 141.

Sarcophaga (*Heteronychia*) *schineri*: Draber-Moňko, 2007: 232; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pekbey & Hayat, 2011: 12; Pape, 1996: 333; Richet et al., 2011: 29, 94, 101, 135.

Bellieria schineri: Enderlein, 1928: 37.

Pierretia (*Eupierretia*) *schineri*: Baranov, 1941: 375; Rohdendorf, 1937: 375.

Sarcotachinella schineri: Baranov, 1942: 566.

Heteronychia schineri: Kejval, 1998: 63; Lehrer, 2009e: 26; Mihályi, 1979: 151; Rohdendorf, 1970: 670; Verves, 1978b: 42.

Heteronychia (*Eupierretia*) *schineri*: Verves, 1986: 154.

Heteronychia (s. str.) *schineri*: Povolný, 1997: 99; Povolný & Verves, 1990: 297; 1997: 179; Verves, 1998: 53; Verves & Khrokalo, 2014a: 25.

Sarcophaga erythrura: Bezzi, 1907: 480; misidentification: not *Sarcophaga erythrura* Meigen, 1826.

Distribution: Europe: AD, AT, BG, CH, CZ, DE, FR (continental), GR (continental), HR, HU, IT (continental & Sicily), MK, PL, RO, RS, SK, UA; Asia: Mid East (TR), Transcaucasia (AZ, GE).

This species reared in the laboratory on freshly killed snails (Richet et al., 2011).

Material examined: AT: Umg. Mödling, Garten, 06.1997, 2 ♂ (Franz) (NMW). BG: Vitinya, 1968, 1 ♂, 3 ♀ (Ganchev) (SOFM). DE [Bayern]: Bamberg, 1 ♂ (Schmid); Dahau, a. *Prunus* Pad., 11.05. & 25.06. [19]18; 2. & 16. 06. [19]20; 17. 05. [19]21; 9. 08. [19]22, 6 ♂ (Engel) (SMNS). SK: Vtáčnik, 26.06.1957, 1 ♂ (Slamečková) (YVC).

6.4.55. *Heteronychia* (s. str.) *shnitnikovi* (Rohdendorf, 1937)

Pierretia (*Eupierretia*) *shnitnikovi* Rohdendorf, 1937: 365.

Type locality: KZ: environs of Almaty, near Bolshaya Almaatinka River. Holotype: ♂; deposited in ZIN.

Heteronychia (*Eupierretia*) *shnitnikovi*: Fan, 1992: 655; Verves, 1986: 150.

Heteronychia shnitnikovi: Fan & Pape, 1996: 250; Verves, 1990: 597.

Sarcophaga (*Heteronychia*) *shnitnikovi*: Pape, 1996: 333; Whitmore, 2011: 48.

Heteronychia (*Eupierretia*) *peckae* Verves, 1977a: 267. Type locality: KG: Tien Shan, valley of River Sary-Djaz, shore of River Inylchek. Holotype: ♂; deposited in ZIN.

Heteronychia (*Eupierretia*) *peckae*: Verves, 1986: 154.

Heteronychia peckae: Verves, 1990: 585, 596.

Sarcophaga (Heteronychia) peckae: Pape, 1996: 332.

Heteronychia (Eupierretia) tenupenialis Chao & Zhang, 1988: 77. Type locality: Xinjiang: Zhaosu. Holotype: ♂; deposited in IZCA.

Heteronychia tenupenialis: Fan & Pape, 1996: 250.

Sarcophaga (Heteronychia) tenupenialis: Pape, 1996: 335.

Heteronychia kyrgyziana Lehrer, 2013a: 7, **n. syn.** Type locality: not given.

Distribution: Asia: CN (Xinjiang), KZ, Mid Asia (KG, TJ, TM*, UZ).

Description of ♂ *Heteronychia kyrgyziana* is based at photos of ♂ genitalia of *H. shnitnikovi* from Whitmore (2011: 47, figs 74-75). The differences of various original drawings from photos of ♂ genitalia of last species are very petty and reflected the individual styles of painters; they can not be used as reason for designation of a new species.

Material examined: KG: Issyk Kul Province: Cholpon-Ata, 30.07.1966, 1 ♂ (Sychevskaya) (ZMUM). TM: Mary Province: Kara-Tyube, 26.07.1962, 1 ♂ (Ponomarenko) (YVC).

6.4.56. *Heteronychia* (s. str.) *siciliana* (Enderlein, 1928)

Sarcoctenia siciliana Enderlein, 1928: 30.

Type locality: IT: Sicily: Palermo. Holotype: ♂; deposited in MNHUB.

Sarcoctenia siciliana: Verves, 1986: 191.

Sarcophaga (Heteronychia) siciliana: Pape, 1995: 24, 26; 1996: 334; Pape et al., 2002: 219; Richet et al., 2011: 29, 93, 101, 135.

Sarcophaga siciliana: Miralbes, 2002: 1.

Heteronychia siciliana: Povolný, 1997a: 52; 1999: 24; 2000a: 24; 2003: 22, 25. Povolný & Znojil, 1999: 195.

Distribution: Europe: ES (continental), FR (continental), IT (continental & Sicily).

This species reared in the laboratory on freshly killed snails (Richet et al., 2011).

6.4.57. *Heteronychia* (s. str.) *slovaca* Povolný & Slamečková, 1967

Heteronychia (Spatulapica) slovaca Povolný & Slamečková, 1967: 314.

Type locality: SK: Levočská dolina. Holotype: ♂; deposited in MMBC.

Heteronychia (Spatulapica) slovaca: Povolný, 1997b: 99; Verves, 1979: 865, 867; 1986: 53.

Heteronychia (Eupierretia) slovaca: Povolný, 1985: 169.

Heteronychia (s. str.) *slovaca*: Povolný & Verves, 1997: 180; Verves, 1998: 154; Verves & Khrokalo, 2014a: 25.

Sarcophaga (Heteronychia) slovaca: Pape, 1996: 334; Richet et al., 2011: 29, 88, 100, 136.

Spatulapica slovaca: Lehrer, 2012a: 6.

Distribution: Europe: CZ, FR (continental), SK, UA.

6.4.58. *Heteronychia* (s. str.) *smirnovi* (Rohdendorf, 1925)

Sarcophaga smirnovi Rohdendorf, 1925: 57.

Type locality: RU: Moscow Region: Petrovskoye-Razumosckoye. Holotype: ♂; deposited in ZMUM⁶.

Sarcophaga (Heteronychia) smirnovi: Pape, 1996: 334; Whitmore, 2011: 52.

Pierretia (Eupierretia) smirnovi: Rohdendorf, 1937: 370.

Heteronychia smirnovi: Rohdendorf, 1970: 669.

Heteronychia (Eupierretia) smirnovi: Verves, 1986: 150.

Material examined: RU: Voronezh Region: Voronezh State Reserve, 5.06.1957, 1 ♂ (Keleynikova) (YVC).

Distribution: Europe: RU (Moscow and Voronezh* Regions).

6.4.59. *Heteronychia* (s. str.) *tsinanensis* Fan, 1964

Heteronychia (Eupierretia) tsinanensis Fan, 1964: 314.

Type locality: CN: Shandong: Tsinan. Holotype: ♂; deposited in IEAS.

Heteronychia (Eupierretia) tsinanensis: Verves, 1986: 154.

Heteronychia tsinanensis: Fan, 1992: 654; Fan & Pape, 1996: 250.

⁶ after Whitmore, 2011: 52: "The holotype of *Sarcophaga smirnovi*, originally deposited in ZMUM, appears to be lost" (A. Ozerov, pers. comm. 2008)".

Sarcophaga (Heteronychia) tsinanensis: Pape, 1996: 335.
Distribution: Palaearctic: Asia: CN (Shandong).

6.4.60. *Heteronychia (s. str.) tunisiae* (Whitmore, 2011), **n. comb.**

Sarcophaga (Heteronychia) tunisiae Whitmore 2011, p. 15,
Type locality: TN: Tabarka. Holotype: ♂; deposited in ZMUC.
Distribution: Palaearctic: North Africa: TN.

6.4.61. *Heteronychia (s. str.) vagans* (Meigen, 1926)

Sarcophaga vagans Meigen, 1826: 26.

Type locality: Europe: probably DE. Holotype (♀) deposited in MNHN.

Sarcophaga vagans: Böttcher, 1913a: 353; Pape & Merz, 1998: 401; Séguy, 1941: 164.

Sarcophaga (Heteronychia) vagans: Coupland & Baker, 2004: 124; Draber-Moňko, 2007: 232; Kara & Pape, 2002: 294; Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 336; Pape et al., 2002: 219; Pohjoismäki & Kahanpää, 2014: 389; Prado e Castro et al., 2010: 287; Richet et al., 2011: 29, 90, 136; Rudzinski, 2000: 199; Whitmore, 2011: 50.

Bellieria vagans: Enderlein, 1928: 37.

Heteronychia vagans: Artamonov, 1980a: 31; Blackith & Blackith, 1990: 699; Blackith et al., 1994: 427; Kano et al., 1967: 26; Kano & Kurahashi, 1999: 74; Kano & Shinonaga, 1965: 248; Kejval, 1998: 64; Khrokalo & Verves, 2009: 117; Lehrer, 2009e: 26; Mihályi, 1979: 151; Rohdendorf, 1970: 669; Rudzinski & Flügel, 2007: 64; Pape, 1987: 139; Peris et al., 1998: 171, 174; Povolný, 1997a: 53, 56; 2002a: 308; 2003: 22, 25; Verves, 1978b: 42; 1990: 584, 585, 594, 596; 2003: 44; Verves, 2013: 28; Verves & Khrokalo, 2006: 147.

Heteronychia (Eupierretia) vagans: Artamonov, 1988: 29; Povolný & Verves, 1990: 297; Verves, 1976: 28; 1986: 150.

Heteronychia (s. str.) vagans: Povolný, 1997b: 99; Povolný & Verves, 1997: 182; Verves, 1998: 53; 2013: 28; Verves & Khrokalo, 2014a: 25; 2014b: 22.

Sarcophaga nepos Rondani, 1860: 290. Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 11); deposited in MZUF.

Sarcophaga vulnerata Schiner, 1862: 570. Type locality: DE or PL: "Schlezen". Holotype: ♂; deposited in NMW.

Sarcophaga frenata Pandellé, 1896: 182. Type locality: FR: Hautes-Pyrénées, Tarbes. Lectotype: ♂ (designated by Pape, 2004: 33); deposited in MNHN.

Sarcophaga frenata: Böttcher, 1913a: 352; Pape, 2004: 33.

Mehria frenata: Baranov, 1942: 559; Enderlein, 1928: 29.

Pierretia (Eupierretia) frenata: Rohdendorf, 1937: 368.

Sarcophaga bajkalensis Rohdendorf, 1925: 56. Type locality: RU: East Siberia: Krasnoyarsk Region: shore of Lake Baykal. Holotype: ♂; deposited in ZMUM.

Sarcophaga (Heteronychia) bajkalensis: Pape, 1996: 323.

Pierretia (Eupierretia) bajkalensis: Rohdendorf, 1937: 369.

Heteronychia (Eupierretia) bajkalensis: Fan, 1992: 65; Verves, 1986: 149.

Heteronychia bajkalensis: Fan & Pape, 1996: 249; Verves, 1990: 584, 585, 596.

Hartigia anastrenua Baranov, 1942: 621. Type locality: HR: Zagreb. Holotype: ♂; deposited in USNM.

Hartigia anastrenua: Sabrosky & Crosskey, 1970: 429.

Heteronychia (Salemea) anastrenua: Verves, 1986: 159.

Sarcophaga (Heteronychia) anastrenua: Pape, 1996: 323.

Heteronychia (Asceloctis) anastrenua: Peris et al., 1996: 18.

Heteronychia vagans sachalinensis Verves, 1978a: 185. Type-locality: RU: Sakhalin I.: Yuzhno-Sakhalinsk. Holotype: ♂; deposited in ZIN.

Heteronychia (s. str.) vagans forma cruenta: Peris et al., 1998: 171, **n. syn.**; misidentification: not *Sarcophaga cruenta* Pandellé, 1896.

Distribution: Palaearctic: Europe: AD, AT, BU, BE, BG, CH, CZ, DE, DK, ES, FI, FR (continental), HR, HU, IE, IT (continental, Sardinia & Sicily), LV, MD, NL, NO, PL, PT, RO, RS, RU (northwards to Karelia and Arkhangelsk), SE, SK, UA, UK. Asia: Far East: CN (Heilongjiang), JP (Hokkaido); RU (Amur Region, Khabarovsk Region, Kurily Is., Primorye, Sakhalin I.); Mid East: TR; Siberia: RU; Transcaucasia: GE.

Larvae are parasitoids of terrestrial snails *Eulota maacki* (Artamonov, 1985) and succineids (Verves, 1976). Flies reared in the laboratory on freshly killed snails and bred from dead snail *Cepaea nemoralis* (Richet et al., 2011).

Peris et al. (1998: 171) used name “*Sarcophaga vagans* f. (forma) *cruenta*”. According ICZN (15.2; 45.5) “f. *cruenta*” is infrasubspecific invalid name.

Material examined: AT: Admont Umg., Styr. A 502, 1 ♀; Schachmarn, Sonnblickgruppe Südseite subalpin, 2 ♂; Leithagebirge b. Winden, 17.05.1973, 2 ♂; Mögling Umgb. A. i. N 1534, leg. 1 ♂ (Franz) (NMW); Fiss, Ober[hofen im] Inntal, 1436 m, 6.07., 1 ♂; Heutal b. Unken, 07.[19]28, 3 ♂, 1 ♀; Hirschegg Walsertal, 08.[19]35, 2 ♂; Tirol, Namlos, 07.[19]37, 1 ♂ (Engel & Lindner) (SMNS). CH: “Grimsel 14. 1600, 11.08.1924” 1 ♂ (ZSM); Rofau 2260 m, 12.08.[19]32, 1 ♂ (Engel) (SMNS). CZ: Southern CZia, Boubínský prales nr Horní Vltavice, 800-1000 m o. s. l., mountainous mixed beech-fir forest, 25.08.1998, 1 ♂ (Vanhara) (YVC). ES: Playa de Aro, 14.10.1972, 1 ♂ (Harde) (SMNS). DE: [Baden-Württemberg] Federsee, 30.08.[19]19, 1 ♀ (Härtel); Ehringer Wald, 12.06.[19]32, 1 ♂; Schönbuch, 19.06.[19]29, 1 ♂; Stuttgart, Kräherwald, 30.06.[19]40, 9.V.[19]76, 167 ♂; Ummendorfer Ried b. Biberach, 29.06.[19]47 & 13.06.[19]48, 2 ♂; [Bayern] Allgäu, Doismere 1679 m b. Hinterstein, 9.07.[19]21, 1 ♂; Allgäu, Mädelegabel, 25.07.[19]45, 1 ♂; Dahau, 3. & 19.06., 17.08., 23.09.[19]17, 19. & 31.05., 13.06.[19]18, 1. & 6.07., 22.08.[19]19, 28.05., 1. & 27.06.[19]20, 17 ♂, 1 ♀; Fellhorn, 1762 m, 16.07.[19]29, 1 ♂; [Bayern] Hochfelln, 1671 m, 26.07.[19]27, 2 ♂; Innufer b. Nussdorf, 14.07.[19]17, 1 ♂, 1 ♀, (Engel & Lindner) (SMNS); b. Oberaudorf, 4.09.[19]66, 1 ♂ (Hocheck); Riesenhütte, Chiemg[auer] Alp[en], 31.05. & 31.07.[19]19, 3 ♂; Rötelsmoos 892 m, b. Ruhlpolding, 8.07.[19]33, 1 ♂; Schliersee, 2 ♂; Starnberg, 07.[19]28, 1 ♂; Tegernsee, 14.08.[19]17, 1 ♂ (Engel & Lindner) (SMNS); Funtensee, Interlaken, 1000 m, 8.08.1940 2 ♂; Südbayern, Eisenberg b. Memmingen, 29.VI.1947, 1 ♀ (ZSM); Bremen-Vahr, 8.07.1982, 1 ♀ (Vedder) (SMB); [Hesse] Breitenau b. Dahau, 29.07., 20. & 26.08.[19]17, 20.V., 3., 28. & 31.VI.[19]18, 16 ♂; [Sachsen-Anhalt] Frassdorf-Hochriss, 29.06.[19]17, 3 ♂ (Engel) (SMNS). HU: Palatinus Lake, 06.1925, 2 ♀; Tatárszentgyörgy, 06.1925, 3 ♀ (Engel) (ZSM). LV: Taurene, 7.VI.2000, 1 ♂ (Karpa) (LU). RU: Altai Krai: Biysk, on faeces, 20.08.1971, 1 ♂ (Sychevskaya) (ZIN); Altai Republic: Artybash, 9-12.06. & 9.07.1979, 3 ♂ (Zolotarev & Violovich); Krasnoyarsk Region: East Sayan, Mina, Karzanak Hole, 14-16.07.1959, 16 ♂, 31 ♀ (Kolomyietz) (SZM); Kurily Is.: Kunashir I., 2.08.[19]74, 1 ♂ (Artamonov) (YVC); Novosibirsk Region: Rozhdestvenka Village, 19.07.1961, 1 ♂, (Kolomyietz) (SZM); Perm Region: Kungur, 21.06., 31.07., 17. & 28.08.1958, 4 ♂ (Borisova) (ZIN); Primorye: Bikin Basin, confluence of Bolshaya Svetlovodnaya /Biamo/ River and Volnushka /Londo/ River, 21.09.1970, 1 ♂ (Zherikhin); Furmanovo, 17.06.1972, 1 ♂ (Sukhacheva) (YVC); Kedrovaya Pad Nature Reserve, 5.09.1961, 1 ♂ (Soboleva) (FED); Mountain Taiga Station, SE of Usuriysk, 1.09.1962, 3. & 11.08.1963, 3 ♂; Shkotov Plateau, 25.08.1962, 4 ♂; Shkotovsk, 30 km E, valley of Tsimukhe River, 24.08.1962, 1 ♂ (Narchuk) (ZIN); “Vladivostok 19 km”, 1.06.[19]62, 3 ♂ (Rasnitzyn & Sulimov); environs of Vladivostok, Lyanchykhe, 30.06.1963, 2 ♂ (Narchuk) (YVC); 30 km N of Vladivostok, 10.1969, 1 ♂ (Petrova) (FED); “Yakovlevka, Spas[sk] U[ezd] Ussur[iysk] Kr[ai]”, 18.05.1926, 1 ♂ (Filipjev) (YVC); Tomsk, 1.07.1964, 1 ♂ (Kolomyietz); Sakhalin I.: Yuzhno-Sakhalinsk, 26.06., 12. & 16.07.[19]56, 3 ♂ (Violovich) (SZM). SK: Lúto-Bradno, 22.05.1958, 1 ♂ (Slamečková) (YVC).

6.4.62. *Heteronychia* (s. str.) *vervesi* Povolný, 1996

Heteronychia (*Eupierretia*) *vervesi* Povolný, 1996: 99.

Type locality: GR: MK: Pindos Mts, Vikos Aoos. Holotype: ♂; deposited in MMBC.

Heteronychia *vervesi*: Lehrer, 2012c: 21; Povolný & Znojil, 1999: 195.

Sarcophaga (*Heteronychia*) *vervesi*: Richet et al., 2011: 94.

Sarcophaga (*Heteronychia*) *hellenica* Whitmore, 2011: 5, unnecessary new name for *Heteronychia* *vervesi* Povolný, 1996.

Material examined: GR: 1 ♂, without label, leg. Povolný (YVC).

Distribution: Europe: GR (continental).

6.4.63. *Heteronychia* (s. str.) *vicina* (Macquart, 1835)

Sarcophaga *vicina* Macquart, 1835: 225.

Type locality: FR: Bordeaux. Holotype: ♂; deposited in MNHN.

Sarcophaga *vicina*: Pape, 2004: 29; Séguin, 1941: 166.

Sarcophaga (*Heteronychia*) *vicina*: Coupland & Baker, 2004: 114; Menzel & Ziegler, 2002: 390; Pape, 1996: 336; Pape et al., 2002: 219; Richet et al., 2011: 29, 93, 101, 138. Whitmore, 2009: 339.

Heteronychia vicina: Blackith & Blackith, 1990: 699; Blackith et al., 1994: 427; Khrokalo & Verves, 2009: 117; Pape, 1987: 141; Povolný, 1996: 95, 97; Rudzinski & Flügel, 2007: 64.
Heteronychia (Eupierretia) vicina: Povolný & Verves, 1990: 295; Povolný & Znojil, 1990: 47; Verves, 1986: 151.
Heteronychia (s. str.) vicina: Povolný & Verves, 1997: 183; Verves, 1998: 53; Verves & Khrokalo, 2014a: 26.
Sarcophaga ruficauda Zetterstedt, 1838: 650. Type locality: SE: Lycksele Lappmark, Lycksele. Holotype: ♂; deposited in MZLU.
Sarcophaga ebrachiata Pandellé, 1896: 182. Type locality: FR: Hautes-Pyrénées, Arrens. Holotype: ♂; deposited in MNHN.
Bellieria ebrachiata: Enderlein, 1928: 36; Baranov, 1942: 578.
Pierretia (Eupierretia) ebrachiata: Rohdendorf, 1937: 380; Povolný & Slamečková, 1979: 117.
Heteronychia ebrachiata: Mihályi, 1979: 149; Verves, 1978b: 42.
Sarcophaga ebrachiata var. *meadei* Böttcher, 1913a: 361. Type locality: ♂: IT: Turin. Holotype: ♂; deposited in SMF.
Sarcophaga vicina var. *meadei*: Ségué, 1941: 167.
 Distribution: Europe: AT, BG, CH, CZ (Moravia), DE, ES, FI, FR (continental & Corsica), GR (continental), HU, IE, IT (continental), NO, PL, RS, SE, SK, UA, UK. Asia: North Caucasus: RU (Kabardino-Balkaria); Transcaucasia (GE).
 Larvae are internal parasitoids of terrestrial snails (Coupland & Baker 2004; Povolný & Verves, 1997).
 Material examined: AT: Hohe Mandling, S-Hang, 14.10.[19]16 1 ♂ (NMW); Umg. Pernitz, X 1395, 1 ♂. Umg. Mödling, X 2050, 1 ♂ (Franz) (NMW); Dürrnstein b. Lunz, nd. Donau, Herrenalm, 7. 08.[19]40, 2 ♂; Grossglockner, 19-31.07.1937, 1 ♂ (Lindner). CH: "Grimsel 14. 1600, 11.08.1924" 1 ♂ (ZSM). DE: [Baden-Württemberg]: Bodanrück am Bodensee, Hagelstein, 15.08.1949, 1 ♂, 1 ♀, in copula (Augaler); Rottenacker 15.05.[19]31 & 9.06.[19]35, 2 ♂ (Gerstmer & Lindner); Stuttgart, Kräherwald, 12.06.1955, 1 ♂; Ummendorf, Ried b. Bibgrach, 13.06.1948, 1 ♂; [Bayern]: Allgäu: Dolsmer 1679 b. Hinterstein, 15. & 29.07.[19]20, 7. & 9.08.[19]21, 7 ♂; Mädelegabel, 25.07.1949, 1 ♂, 1 ♀; Osterachtai, 1650 m, 30.06.[19]24, 3 ♂; Fellhorn, 1762 m, 16.07.[19]29, 2 ♂; Grubigstein, Leucht Alpen, 15.07.1931, 1 ♂; Hochfelln, 1671 m, 16.07.[19]27, 1 ♂; Togernsee: Risser Kogel, 14.08.[19]17, 1 ♂; Wallberg, 16.06.[19]17, 1 ♂ (Engel & Lindner) (SMNS).

6.4.64. *Heteronychia (s. str.) violovitshi* Rohdendorf & Verves, 1979

Heteronychia (s. str.) violovitshi Rohdendorf & Verves, 1979: 193.
 Type locality: RU: Sakhalin I.: Yuzhno-Sakhalinsk. Holotype: ♂; deposited in ZIN.
Heteronychia violovitshi: Artamonov, 1980a: 31; Verves & Khrokalo, 2006: 146.
Heteronychia (s. str.) violovitshi: Verves 1986, p. 154.
Sarcophaga (Heteronychia) violovitshi: Pape, 1996: 336.
 Distribution: Asia: Far East (Sakhalin I.).

6.5. Subgenus *Pandelleola* Rohdendorf, 1937

Pandelleola Rohdendorf, 1937: 328, as subgenus of *Pierretia* sensu Rohdendorf, 1937: 303; misidentification: not *Pierretia* Robineau-Desvoidy, 1863.
 Type species: *Sarcophaga filia* Rondani, 1860, by original designation.
Heteronychia (Pandelleola): Peris et al., 1996b: 22; Rohdendorf, 1965: 684, 693; Verves, 1986: 154.
Pandelleola: Lehrer, 2008a: 1; 2012e: 4.
Ashlaiana Lehrer, 1998b: 5; **n. syn.** Type species: *Ashlaiana shakrana* Lehrer, 1998b: 5 [= *Sarcophaga boettcheri* Villeneuve, 1912], by original designation.
Ashlaiana: Lehrer, 2012f: 9.
 "Sarcophaga (*Heteronychia*) *filia*-group" (in part): Whitmore et al., 2013: 629.
 5 species of this subgenus are distributed in Mediterranean and Mid-Asian Regions.
 Morphological features of ♂ genitalia of *Heteronychia (Pandelleola) filia* and *H. (P.) boettcheri* are not distinguishable for designation of separate monotypic genus *Ashlaiana*.

6.5.1. *Heteronychia (Pandelleola) boettcheri* (Villeneuve, 1912)

Sarcophaga boettcheri Villeneuve, 1912b: 610.
 Type locality: Lectotype: ♂ (designated by Whitmore, 2011: 21); deposited in IRSNB.
Sarcophaga boettcheri: Böttcher, 1913a: 129; Ségué, 1941: 81.

- Sarcophaga (Heteronychia) boettcheri*: Koçak, 2014: 350; Koçak & Kemal, 2013: 137; Pape, 1996: 324; Pekbey & Hayat, 2011: 3; Whitmore, 2011: 21.
- Bellieria boettcheri*: Enderlein, 1928: 29.
- Pierretia (Boettcherella) boettcheri*: Rohdendorf, 1937: 340.
- Mehria boettcheri*: Baranov, 1942: 556.
- Heteronychia boettcheri*: Lehrer, 1998b: 3; 2012b: 12; Mihályi, 1979: 143.
- Heteronychia (Boettcherella) boettcheri*: Povolný, 1996: 108; Verves, 1986: 154; 1993: 489.
- Heteronychia (Eupierretia) boettcheri*: Povolný & Verves, 1990: 312, 315.
- Heteronychia (Pandelleola) boettcheri*: Verves & Khrokalo, 2014a: 26.
- Pierretia (Pandelleola) taurica* Rohdendorf, 1937: 333. Type locality: UA: Crimea, valley of Alma River. Holotype: ♂; deposited in ZIN.
- Heteronychia taurica*: Rohdendorf, 1970: 665; Verves, 1978b: 41.
- Heteronychia (Pandelleola) taurica*: Verves, 1986: 155; 1998: 53.
- Heteronychia (Boettcherella) taurica*: Povolný & Verves, 1990: 312, 315, 316.
- Sarcophaga (Heteronychia) taurica*: Kara & Pape, 2002: 294; Pape, 1996: 336; Richet et al., 2011: 90.
- Pandelleola taurica*: Lehrer, 2006c: 18; 2008a: 1; 2012e: 4.
- Heteronychia (Pandelleola) telengai* Verves, 1973: 947, **n. syn.** Type locality: UA: Zaporizzhya Region: environs of Zhdanov [= Berdyansk]. Holotype: ♂; deposited in SIZK.
- Heteronychia (Pandelleola) telengai*: Verves, 1986: 155; 1998: 53.
- Sarcophaga (Heteronychia) telengai*: Pape, 1996: 335.
- Heteronychia (Pandelleola) gaspari* Lehrer, 1977b: 226, Type locality: TR: Akçakoca, Bola. Holotype: ♂; deposited in LZG.
- Heteronychia bodediana* Lehrer, 1998b: 6. Type locality: not given.
- Pandelleola caraormana* Lehrer, 2008a: 5. Type locality: RO. Holotype: ♂; deposited in MGAB.
- Ashlaiana shakrana* Lehrer 1998b: 5, Type locality: IL: Swamp Herzliyya. Holotype: ♂ (by designation of Lehrer, 2012b: 12); deposited in TAU.
- Pandelleola shakrana*: Lehrer, 2012e: 9.
- Pandelleola lunzeria* Lehrer, 2012e: 5, **n. syn.** Type locality: not given.
- Pandelleola pieriana* Lehrer 2012e: 5, **n. syn.** Type locality: GR: Platamon-Gipfel. Holotype: ♂; deposited in MMBC.
- Pandelleola immortalis* Lehrer, 2012e: 6, **n. syn.** Type locality: IL: Tel Avo4, Tel Barukh. Holotype: ♂; deposited in TAU.
- Pandelleola karmelina* Lehrer, 2012e: 7, **n. syn.** Type locality: IL: Har Karmel, 32°44' N 34°03' E. Holotype: ♂; deposited in TAU.
- Distribution: Europe: AT, BG*, GR (continental, Cyclades Is. & Poros I.), HR, HU, RO, RS, UA; Asia: Mid East (CY, IR, IL, SY, TR, PS); Transcausia (AZ).
- Larvae are parasitoids of terrestrial snail *Theba pisana* (Lehrer 2006c).
- Original revision of holotype of *Heteronychia (Pandelleola) telengai* Verves, 1973 shows its identity to *Sarcophaga boettcheri* Villeneuve, 1912. Descriptions of ♂ *Pandelleola lunzeria* Lehrer, 2012 and ♂ *P. pieriana* Lehrer, 2012 are based at drawings of ♂ genitalia of *H. taurica* from Povolny 1996, appropriately figs 22 and 23. The differences between various original drawings of ♂ genitalia of those species are very petty and reflected the individual styles of painters; they can not be used as reason for designations of both new species. The original descriptions and drawings of ♂ genitalia of *Pandelleola immortalis* Lehrer, 2012 and *P. karmelina* Lehrer, 2012 are very detailed and practically not differentiated from similar descriptions and drawings of *H. boettcheri* (= *taurica*) by other authors (Mihályi, 1979; Povolný & Verves, 1990; Richet et al., 2011; Rohdendorf, 1937; Verves, 1993; Whitmore, 2011 etc).
- Material examined: AZ: Lenkoran District: Vel, 4.06.1959 1 ♂, 1 ♀ (Richter) (YVC). BG: "Burgas 07 S 109 N." 1 ♂ (Nedelkov). HR: 'Ungarn' 5.07.1912, 1 ♂. IL: Jerusalem, Mt. Scopus, 19.10.1931 & 2.05.[19]33, 35 ♂s, 12 ♀ (Aharoni) (SMNS); Jerusalem, 6.07.1939, 1 ♂, (BMNH). SY: Golan heights, Katsrin, 9.10.2006, 1 ♂ (Szpila). TR: Antalya: Side, clay loam waste plot of land, 36°47'38" N, 31°22'43" E, 10-19.08.2011, 4 ♂, 1 ♀ (Verves & Khrokalo) (YVC & IEEU).

6.5.2. *Heteronychia (Pandelleola) filia* (Rondani, 1860) (Figs 18-20)

Sarcophaga filia Rondani, 1860: 385.

Type locality: IT: "In Italia media et boreali". Lectotype: ♂ (designated by Pape, 1988: 8); deposited in MZUF.

Sarcophaga filia: Böttcher, 1913a: 122; Hayat et al., 2008: 389; Romera et al., 2003: 49; Séguy, 1941: 102.

Sarcophaga (Heteronychia) filia: Coupland & Barker, 2004: 113, 124; Draber-Moňko, 2007: 232; Kara & Pape, 2002: 293; Koçak, 2014: 349; Koçak & Kemal, 2013: 138; Pape, 1996: 327; Pekbey & Hayat, 2011: 6; Richet et al., 2011: 12, 29, 60, 89, 109, 130, 217; Whitmore, 2009: 572, 574; 2011: 29.

Mehria filia: Baranov, 1942: 558; Enderlein, 1928: 29.

Pierretia (Pandelleola) filia filia: Rohdendorf, 1937: 331.

Heteronychia (Pandelleola) filia: Peris et al., 1996b: 22; Povolný, 1996: 107; 1997b: 99; 2002b: 169; Povolný & Verves, 1997: 180; Rohdendorf, 1965: 693; Verves, 1986: 154; 1998: 53; Verves & Khrokalo, 2014a: 27.

Heteronychia filia: Mihályi, 1979: 142; Rohdendorf, 1970: 666.

Pandelleola filia: Lehrer, 2006c: 18; 2009e: 26.

Sarcophaga iuvenis Rondani, 1860: 388. Type locality: IT: Parma. Lectotype: ♂ (designated by Pape, 1988: 9); deposited in MZUF.

Heteronychia (Pandelleola) lyneborghi Rohdendorf, 1975: 199. Type locality: ES: Granada: Torrenueva E Motril. Holotype: ♂; deposited in ZMUC.

Heteronychia (Pandelleola) lyneborghi: Verves, 1986: 155.

Pandelleola lyneborghi: Lehrer, 1996b: 263.

Sarcophaga (Heteronychia) lyneborghi: Pape, 1996: 330.

Pandelleola resnikae Lehrer, 1996b: 261. Type locality: ES: Balearic Is: Mallorca I., Monasterio de Lluch. Holotype: ♂; deposited in ZMAM.

Distribution: Europe: AT, BE, BG, CH, CZ, ES (continental & Balearic Is.), FR (continental & Corsica), GR, HR, HU, IT (continental & Sardinia), MK, MT, NL, PL, RO, RS, RU (Voronezh Region), SK, UA. Asia: Mid East (IL, PS, TR); North Africa: MA.

Larvae are parasitoids of terrestrial snails *Helix* spp. (Böttcher, 1913a; Rostand, 1920), *Cernuella virgata* and *Theba pisana* (Coupland, 1994; Coupland & Barker, 2004, Hopkins & Baker, 1993). This species reared in the laboratory on freshly killed snails (Richet et al., 2011).

Material examined: AT: Mögling Umgb. A. i., N 1534 & N 1613, 2 ♂ (Franz) (NMW). DE: [Baden-Württemberg]: Rotenacker, 5.06.1932, 1 ♂. GR: Rhodos, 06.-07.19621 ♂, 1 ♀ (Lindner). HU: Alsoessöpuszta bei Örkény, 15.06.[19]25, 1 ♂ (Engel). IL: "Rehoboth bei Jaffa", 17.III.[19]33, 1 ♂ (Aharoni) (SMNS); Kiriat Anavim, "Judean Highlands, Palestine", 8.10.[19]30, 1 ♂ (BMNH). SK: Zobor, 28.08.[19]56, 1 ♂ (Slamečková). TR: Antalya: Side, clay loam waste plot of land, 36°47'38" N, 31°22'43" E, 10-19.08.2011, 48, ♂, 15 ♀ (Verves & Khrokalo) (YVC & IEEU).

6.5.3. *Heteronychia (Pandelleola) filiola* (Rohdendorf, 1937)

Pierretia (Pandelleola) filiola Rohdendorf, 1937: 333.

Type locality: UA: Crimea: Kara Dag. Holotype: ♂; deposited in ZIN.

Heteronychia filiola: Rohdendorf, 1970: 665.

Heteronychia (Pandelleola) filiola: Verves, 1986: 154; 1998: 53; Verves & Khrokalo, 2014a: 27.

Sarcophaga (Heteronychia) filiola: Pape, 1996: 328.

Distribution: Europe: UA (Crimea).

6.5.4. *Heteronychia (Pandelleola) sicilia* (Pape, 1996)

Sarcophaga (Heteronychia) sicilia Pape, 1996: 334; new name for *Pierretia (Pandelleola) filia siciliana* Rohdendorf, 1937.

Heteronychia (Pandelleola) sicilia: Povolný, 2002b: 168.

Sarcophaga (Heteronychia) sicilia: Gatt & Ebejer, 2014: 112; Richet et al., 2011: 90; Whitmore, 2011: 48.

Pierretia (Pandelleola) filia siciliana Rohdendorf, 1937: 332; junior secondary homonym of *Sarcoctenia siciliana* Enderlein, 1928. Type locality: IT: Sicily: Palermo. Holotype: ♂; deposited in ZIN.

Heteronychia (Pandelleola) siciliana: Verves, 1986: 155.

Heteronychia (Pandelleola) volcanoetnica Povolný, 2002b: 165. Type locality: IT: Sicily: Etna, eastern slope, Bosco Rabago. Holotype: ♂; deposited in MMBC.

Heteronychia (Pandelleola) volcanoetnica: Povolný, 2003: 19.

Distribution: Europe: IT (Sicily), MT. Larvae are the parasitoids of land snail *Tudorella melitense* (Gatt & Ebejer, 2014).

6.5.5. *Heteronychia (Pandelleola) turana* (Rohdendorf, 1937)

Pierretia (Pandelleola) filia turana Rohdendorf, 1937: 332.

Type locality: UZ: Samarkand Region: Kumak near Kattakurgan. Holotype: ♂; deposited in ZIN.

Heteronychia turana: Rohdendorf, 1970: 666, Verves, 1978b: 41;
Heteronychia (Pandelleola) turana: Povolný, 1992: 182; 1996: 109; 2002b: 167; Verves, 1986: 155.
Sarcophaga (Heteronychia) turana: Koçak, 2014: 350; Koçak & Kemal, 2013: 138; Pape, 1996: 335; Pekbey et al., 2011: 194.
Distribution: Asia: KZ; Mid East (IR, TR); Mid Asia (TJ, TM, UZ), Transcaucasia.
Larvae are internal parasitoids of terrestrial Helicidae (Povolný, 1996).
Material examined: AZ: Nakhchivan Autonomous: Ordubad District: Bilav, 25.05.1967, 1 ♀; Lerik District: Kosmolyan, 7.06.1969, 1 ♀; Nyuravud, canyon of Orand River, 2 ♂, 1 ♀, 14.07.1970, leg. Richter (YVC). TJ: Faisalabad District: Khamza, 22.07.[19]82, 1 ♀; Shaartuz District: Lomonosov Kolkhoz, 4.07.[19]82, 1 ♂ (Nachmetdinov) (YVC).

7. Genus *Karovia* Lehrer, 1995

Karovia Lehrer, 1995c: 110.

Type species: *Sarcophaga hirticrus* Pandellé, 1896, by original designation.

One Palaearctic species.

7.1. *Karovia hirticrus* (Pandellé, 1896)

Sarcophaga hirticrus Pandellé, 1896: 193.

Type locality: FR: Hautes Pyrénées, Tarbes. Lectotype: ♂ (designated by Pape, 2004: 35); deposited in MNHN.

Sarcophaga hirticrus: Barfoot, 1969: 144; Beaver, 1972: 41; Böttcher, 1912: 716; Pérez-Moreno et al., 2006: 169; Schembri et al., 1991: 270; Séguy, 1941: 108.

Sarcophaga (Helicophagella) hirticrus: Blackith et al., 1997: 397, 430; Coupland & Barker, 2004: 112, 124; Draber-Moňko, 2007: 232; Gatt & Ebejer, 2014: 109; Pape, 1996: 319; Pape et al., 2002: 219; Prado e Castro et al., 2010: 286; Richet et al., 2011: 27, 102, 122, 200.

Villeneuveella hirticrus: Enderlein, 1928: 34.

Thyrsocnema hirticrus: Baranov, 1942: 605; Enderlein, 1928: 43.

Bellieria (s. str.) hirticrus: Rohdendorf, 1937: 133.

Bellieria hirticrus: Mihályi, 1979: 117; Rohdendorf, 1970: 655; Verves, 1978b: 40.

Helicophagella hirticrus: Pape, 1987: 133; Povolný, 1999: 19; Verves, 1986: 137.

Helicophagella (Parabellieria) hirticrus: Peris et al., 1994a: 82, 84.

Karovia hirticrus: Lehrer, 1995c: 110; 2000b: 445; 2006e: 4; Verves & Khrokalo, 2014a: 27.

Heteronychia (Eupierretia) hirticrus: Povolný & Verves, 1990: 295.

Heteronychia (s. str.) hirticrus: Povolný, 1997b: 99; Povolný & Verves, 1997: 174; Verves, 1998: 53.

Sarcophaga excuticulata Pandellé, 1896: 202, Type locality: FR: Hautes-Pyrénées. Lectotype: ♀ (designated by Pape, 2004: 30); deposited in MNHN.

Sarcophaga agricola: Meade, 1876: 261; misidentification: not *Myophora agricola* Robineau-Desvoidy, 1830.

Sarcophaga noverca: Kramer, 1905: 33; misidentification: not *Sarcophaga noverca* Rondani, 1860.

Distribution: Europe: AL, AD, AT, BG, CH, CZ, ES (continental & Balearic Is.), FR (continental & Corsica), DE, HR, HU, IT (continental & Sicily), MT, PL, PT, RO, RS, SE, SK, UA, UK. Asia: Mid East (IL); North Caucasus: RU (Krasnodar Region); Transcaucasia (AZ, GE). North Africa: DZ.

Flies in nature bred from a dead swallow (Richet, 1990), dead, and occasionally living (as facultative parasitoids) snails *Cantareus aspersus* (Barfoot, 1969; Coupland & Barker, 2004), *Cepaea nemoralis* (Beaver, 1972, 1973, 1977), *Cernuella virgata* (Coupland, 1994; Coupland & Barker, 2004), *Helix* sp. (Blackith et al., 1997) and *Theba pisana* (Coupland & Barker, 2004), This species reared in the laboratory from pig liver (Pérez-Moreno et al., 2006).

Material examined: GE: Abkhazia: environs of Gagra, forest, 200-300 m a. s. l., 12-16.08.1970, 13 ♂, 1 ♀ (Verves) (YVC).

8. Genus *Notoecus* Stein, 1924

Notoecus Stein, 1824: 201.

Type species: *Sarcophaga longestylata* Strobl, 1906, by monotypy.

Notoecus: Lehrer, 2003: 29, 341; Mihályi, 1979: 56, 125; Peris et al., 1994b: 156; Rohdendorf, 1937: 389; Séguy, 1941: 169; Verves, 1986: 139; 1993: 489.

Sarcophaga (Notoecus): Pape, 1995: 3; 1996: 370.

Adiscalis Enderlein, 1928: 34. Type species: *Sarcophaga longestylata* Strobl, 1906, by monotypy.
One Mediterranean species.

8.1. *Notoecus longestylatus* (Strobl, 1906) (Figs 4-6)

Sarcophaga longestylata Strobl, 1906: 343.

Type locality: ES: Algeciras. Holotype: ♂; deposited in Stift Admont, a Benedictine monastery in Admont City, AT.

Sarcophaga longestylata: Böttcher, 1912: 710.

Sarcophaga (Notoecus) longestylata: Pape, 1996: 370; Pape et al., 2002: 219; Raffone, 2009: 108; Whitmore, 2010: 82.

Sarcophaga (Heteronychia) longestylata: Whitmore, 2010: 218.

Adiscalis longestylata: Enderlein, 1928: 34.

Notoecus longestylatus: Lehrer, 2003: 341; Mihályi, 1979: 125; Peris et al., 1994b: 156; Rohdendorf, 1937: 389; 1975: 198; Séguy, 1941: 170; Verves, 1986: 139.

Notoecus madeirops Lehrer 2013b: 4, n. **syn.** Type locality: not given.

Notoecus longistylatus: Rohdendorf, 1975: 198 (incorrect subsequent spelling of *longestylatus*).

Distribution: Europe: ES (continental) IT (continental), PT. North Africa: DZ, MA, TN.

Flies bred from hive of *Apis mellifera* (Séguy, 1953).

Description of ♂ *Notoecus madeirops* Lehrer, 2013 based at photos of ♂ genitalia of *N. longestylatus* from Whitmore (2010: 218, pl. 45). The differences between those photos and various original drawings of ♂ genitalia of *N. longestylatus* are very petty and reflected the individual styles of painters; they can not be used as reason for designations of a new species.

Material examined: ES: Granada: Torrenueva, 18.04.1966, 1 ♂, 1 ♀ (YVC).

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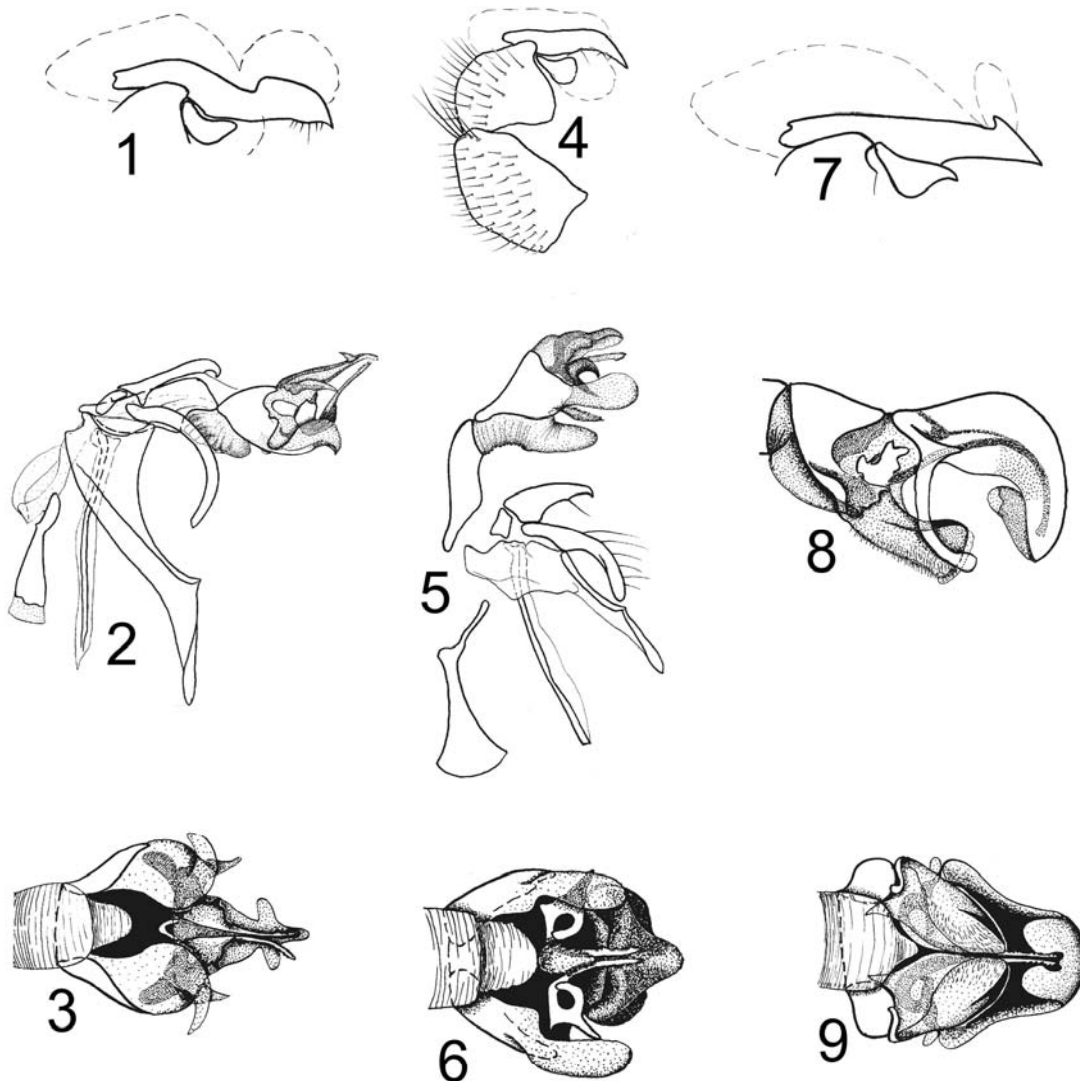
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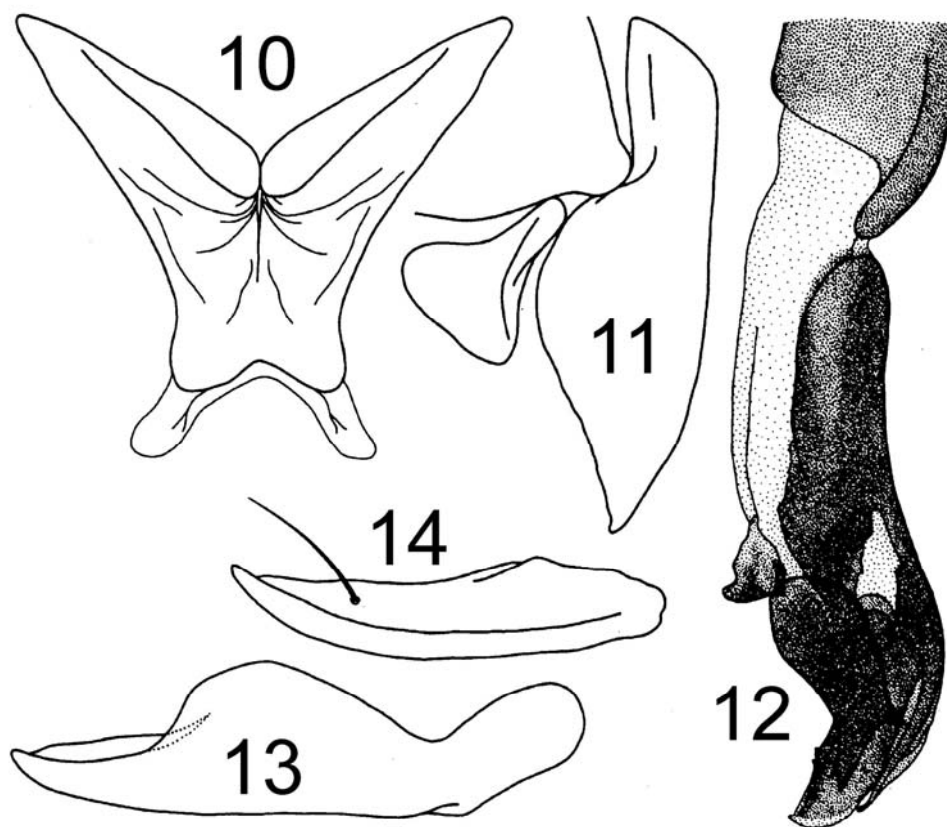
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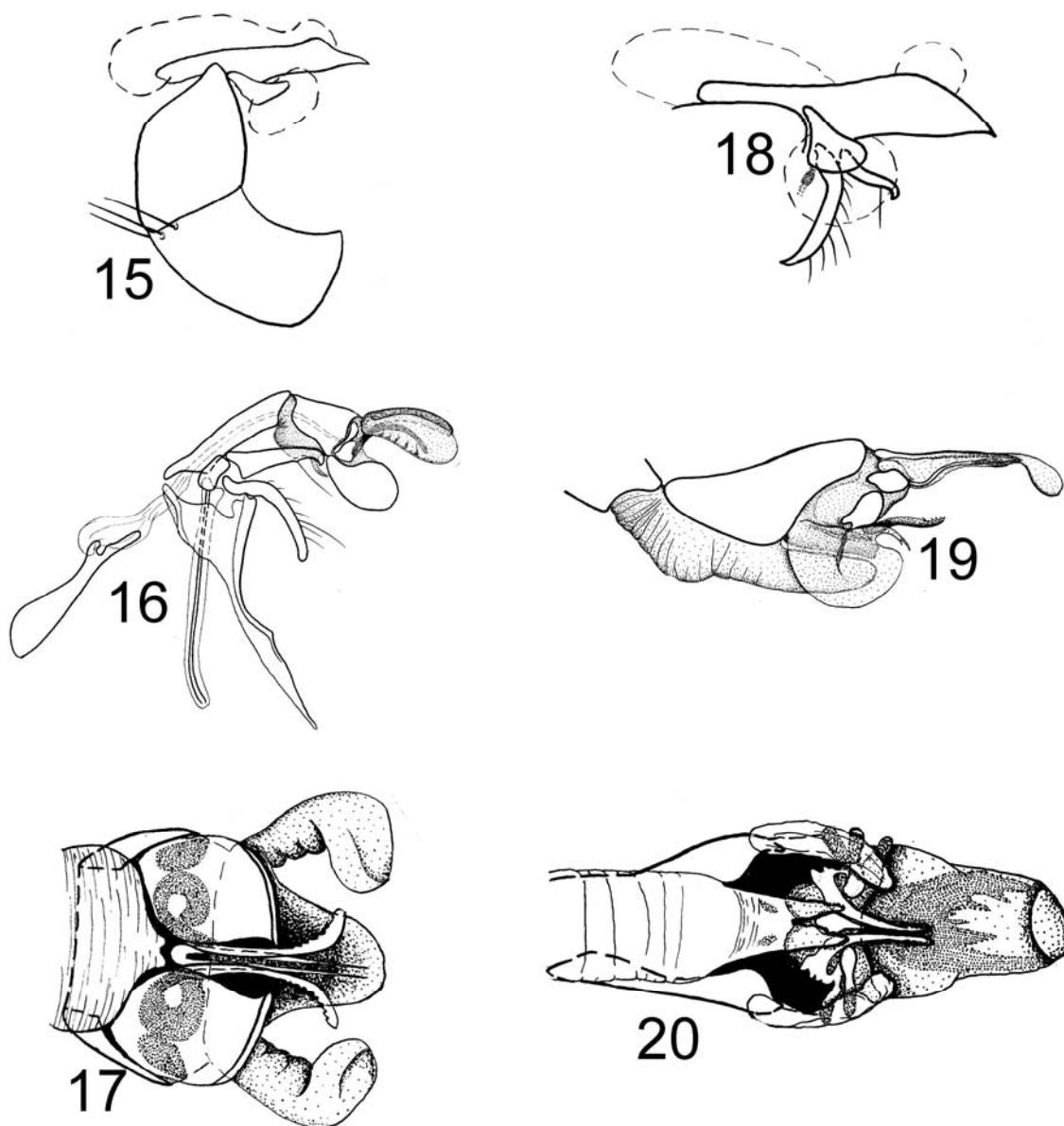
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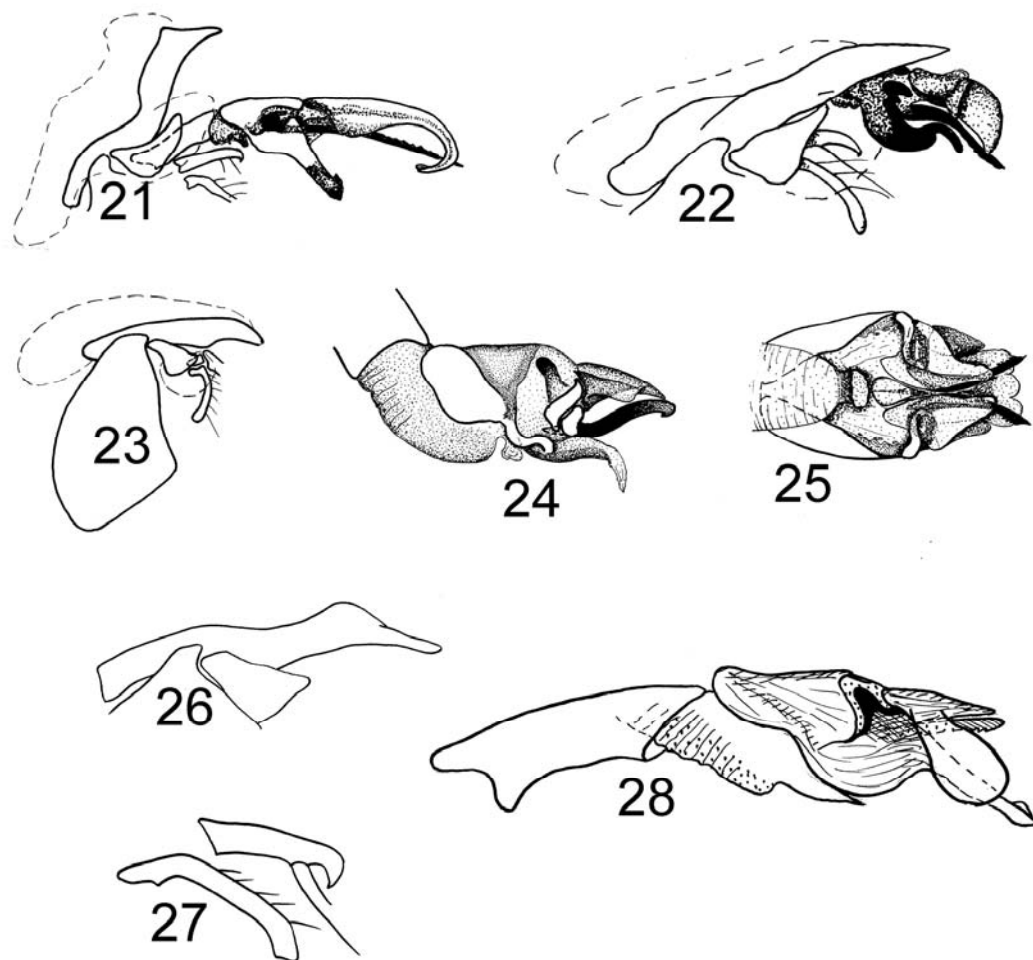
Figs 1-9. Cercus & surstylus, laterally (1, 7), aedeagus and gonites, laterally (2, 5), distiphallus, ventrally (3, 6, 9), postabdominal segments, cercus & surstylus, laterally (4), 8. distiphallus, laterally (8). - 1-3. *Artamonoviella monspellensia* (Bött.), after Verves, 1993; - 4-6. *Notoecus longestylatus* (Strobl), original; - 7-9. *Discachaeta cucullans* (Pand.), after Verves, 1993.



Figs 10-14. 5th abdominal sternite, ventrally (10), cercus & surstylus, laterally (11), distiphallus, laterally (12), 13. pregonite, laterally (13), 14. Posgonite, laterally (14). - 10-14. *Karovia hirticrus* (Pand.), after Lehrer, 1995.



Figs 15-20. 15. Genital segments, cercus & surstylus, laterally (15), aedeagus and gonites, laterally (16), distiphallus, ventrally (17, 20), cercus & surstylus, laterally (18), distiphallus, laterally (19). - 15-17. *Heteronychia (Boettcherella) setinervis* (Rd.), original; - 18-20. *Heteronychia (Pandelleola) filia* (Rd.), original.



Figs 21-28. 21. Male genitalia, laterally (21, 22), epandrium, cercus & surstylus, laterally (23), distiphallus, laterally (24, 28), distiphallus, ventrally (25), gonites, laterally (27). - 21. *Heteronychia (Asceloctis) balanina* (Pand.), original; - 22. *Heteronychia (Ctenodasypygia) minima* (Rd.), original; - 23-25. *Heteronychia (s. str.) proxima* (Rd.), original; - 26-28. *Heteronychia (s. str.) depressifrons* (Ztt.), original.

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